

The magazine for AUSTRALIAN radio amateurs

Volume 75 No 7
July 2007

Amateur Radio



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*Experiments with various
wire antennas*

Mobile 80 m antenna tests

ISSN 0002-6859



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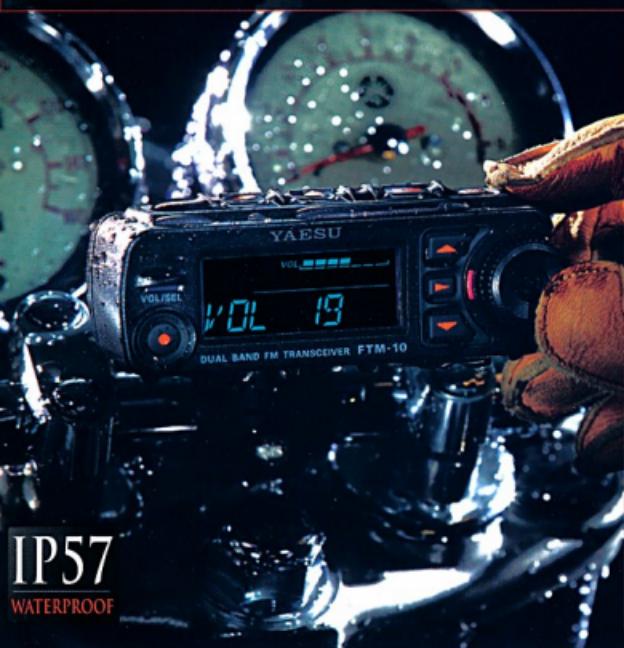
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Amateur Radio

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Our Cover this month

Christina Simon VK3FOXE, one of the new breed of YLs, in her shack.
She is also a poet. See "CQ" on page 29.

Contributions to Amateur Radio

Amateur Radio is a forum for WIA members' amateur radio experiments, experiences opinions and news. Manuscripts with drawings and/or photos are always welcome and will be considered for publication. Articles on disc or email are especially welcome. The WIA cannot be responsible for loss or damage to any material. A pamphlet, "How to write for Amateur Radio" is available from the National Office on receipt of a stamped self-addressed envelope.

Back Issues

Back issues are available directly from the WIA National Office (until stocks are exhausted), at \$4.00 each

(including postage within Australia) to members.

Photostat copies

When back issues are no longer available, photocopies of articles are available to members at \$2.50 each (plus an additional \$2 for each additional issue in which the article appears).

Disclaimer

The opinions expressed in this publication do not necessarily reflect the official view of the WIA and the WIA cannot be held responsible for incorrect information published.

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A radiocommunication service for the purpose of self-training, intercommunication and technical investigation carried out by amateurs; that is, by duly authorised persons interested in radio technique solely with a personal aim and without pecuniary interest.

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Member of the

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Editorial Comment

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Women in Radio

For several years, we have had a focus of "Women in Radio" for the July issue. Why have this focus? Simple – July marks the birthday of ALARA (Australian Ladies' Amateur Radio Association). We have taken the liberty of celebrating "new" YL (Young Lady) operators on the cover and Inside Back Cover of this issue. In addition to the usual ALARA column in the "News From" section of the magazine, we try to include additional material with a YL focus in the July issue. So, we have a feature on two prominent ALARA members, together with a poem written by Christina VK3FOXE, who appears on our cover.

Delivery survey

All members of the Publications Committee thank members who have replied to our request for information of delivery of AR magazine. The information has proved to be most informative. At the time of writing, we have enough responses to give us an idea of delivery times across the nation.

In order to be even more useful, we ask you to again forward the information for this issue of AR and the next two issues. You will see a reminder on the fly/cover sheet which has your address details for the copies of AR mailed to subscribers.

For the next three (3) issues, please continue to send an email to delivery@wia.org.au with the details of your callsign, your postcode and the date of delivery of AR in the body of the message. "Subject" can be a simple message, such as "July delivery", even just leave the body blank and include the required details as the "Subject".

Contests and activity

It appears that this month has a lot of Contest news. In addition to the usual Contest column, we have the Results from the John Moyle Memorial Field Day Contest, thanks to Denis VK4AIG/VK3ZUX. These results arrived just in time for the last issue of AR, but we would have needed to remove some other

content to include them. Therefore, they appear this month, despite the fact that they have been available via the WIA web site for most of the last month.

We also have the Rules for the Remembrance Day Contest and for the ALARA Contest, both occurring in August. Also, for August, do not forget the International Lighthouse/Lightship Weekend. August is looking like a potentially busy month of activity.

Now that we have gone past the middle of June, the frequency of "ham fest" type activity declines for a couple of months. Whilst we still have the occasional event, it seems that winter is less preferred for this type of activity. We have the GippsTech Technical Conference held in early July at Churchill (without the commercial traders), the Gippsland Gate ARC event two weeks later, and an event in VK6 on the first weekend in August. It is then a gap until such activity resumes at the higher pace seen through the spring to autumn period. I am sure that the major manufacturers appreciate the relative pause in the pace of activity.

I must admit, wearing another hat as the Chair of the GippsTech Organising Committee, the lower frequency of events, and lower level of VHF/UHF and above activity, at this time was part of the reason for holding this event in the middle of winter. Hopefully the event, on July 7 and 8, will be (or will have been) a success.

One of the articles this month reports some interesting results from tests of a variety of mobile antennas for 80 metres. The challenge for us now is to convince the author to inform us all of the details of the winning antenna.

Please continue to make your contributions to the magazine. Just remember that our review and preparation process can be slow, so it may be several months before your technical article appears in print. News items usually appear in the next issue, provided that the material arrives by around the 6th of the month preceding.

73 until next month.

Peter VK3KAI

ar

Michael Owen VK3KI

Amateur radio's advocates

We argue that every amateur should be a member of the national amateur radio society, the WIA in Australia, as the national radio society represents the amateur service nationally and, ultimately, internationally.

Why does representation matter? Because there is just more demand for spectrum than can be satisfied, and without a family of frequencies across the radio frequency spectrum, and appropriate regulation, the amateur service would just not exist.

Spectrum allocation and formulation of basic regulation is, necessarily, an international matter, the function of the International Telecommunications Union, the ITU. The ITU does this through World Radiocommunications Conferences, (WRCs), held every 3 or 4 years.

The review of frequency allocation to different services in response to changing needs and conditions is an ongoing process. As one WRC ends the spectrum managers and the services start preparing for the next one. Many technical issues surrounding competing technologies are often referred to various study groups to analyse potential interference problems and report so administrations can form a national or regional position.

As much of those ongoing processes are steps to achieve a result, sometimes not an obvious step, it makes it that much harder to describe in simple terms.

But every few years there is a peak in the process, when there is an ITU WRC. Some WRCs may not be so important for the amateur service, as each WRC has its own agenda which may or may not include items affecting amateurs.

The next ITU WRC is 22nd October to 16th November this year. There are likely to be four proposals of immediate concern to the amateur service.

How do we organise that representation at the different levels?

Each national amateur radio society (including the WIA) is a member of the International Amateur Radio Union, the IARU, and the appropriate IARU regional organisation.

The IARU is a Sector Member of the ITU's Radiocommunications Sector, and

as such has the right to participate in the various study groups and working parties that prepare the technical reports that become a foundation for the ITU member countries to propose changes to the allocation of spectrum or regulation.

A part of the international process is the regional organisations. The ITU divides the world into three regions for frequency allocation purposes. Regional organisations have emerged, where the member countries develop common positions on issues to be considered at a WRC, so forming a voting block.

Currently, the basic responsibility of representation at the regional level is the responsibility of the three IARU regional organisations.

As I write this Comment, Larry Price W4RA, President of the IARU, and Dave Sumner K1ZZ, Secretary of the IARU, are in Geneva, Switzerland, at a meeting of Working Party 8A on behalf of the IARU. That Working Party is preparing an ITU "Handbook" on the Amateur and Amateur Satellite Services, one of the less direct but valuable ways of preserving the amateur position.

The IARU will have observer status during the WRC, its observer team will include several experienced amateurs.

At the same time 'Selva' Selvadurai 9V1UV is in Kuala Lumpur, Malaysia, attending the Asia-Pacific Broadcasting Union (ABU) Preparatory Seminar on WRC 07 on behalf of IARU Region 3. His role is to present a paper setting out the amateur service requirements, not only at 7 MHz, but also at 5 MHz.

Shizuo Endo JE1MUI and Peter Lake ZL2AZ will attend the 5th meeting of the Preparatory Group of the Asia-Pacific Telecommunity, 'our' regional organisation, in Busan, Korea, on the 16th to 21st July 2007.

In Australia, David Wardlaw VK3ADW and Keith Malcolm VK1ZKM are gearing up for the next Australian preparatory group meeting early in July. This will finally lead to an Australian position for WRC later this year.

That position is developed through meetings of the various spectrum users, government users such as defence, aviation, and the like, commercial

users such as Telstra and Optus, and the amateur service represented by the nominees of the WIA.

That position becomes the brief for the Australian delegation to the WRC.

Keith will then join the Australian delegation to the WRC, nominated by the WIA and his travel and accommodation expenses are met by the WIA.

The role of the national amateur radio society, that of the amateur regional organisation and the IARU are each a critical part of the matrix of representation.

But why have an amateur delegate on the Australian delegation and not just rely on the IARU? Because the IARU has only observer status and can only provide information and act in a coordinating role. Only countries have votes and only members of delegations have the right to speak.

A WRC may have 3,000 delegates. It meets in plenary session and works through committees that form sub-committees that form working groups that may form sub-working groups. Many meetings are concurrent, giving countries with larger delegations an advantage. But even then, we need an amateur to follow the amateur matters.

The WIA pays a subscription of \$71 US cents per transmitting member to IARU Region 3. A tiny part of that, 10%, is passed on to the International Secretariat of the IARU, though almost all the costs of the IARU are directly borne by the ARRL, as the International Secretariat.

The WIA sets aside every year \$2 of each member's subscription to create a provision to meet all these costs, including the costs associated with the preparation for the WRC and participation in the Australian delegation.

The WIA has a unique role as the Australian amateurs' advocate to protect amateur privilege, nationally and internationally. It is able to perform that role effectively because of the expertise and dedication of its volunteers.

That is one of the important reasons why we can argue that all amateurs should belong to the WIA.

WIA News

WIA announces membership and exam cost changes

From 1 July 2007, the cost of Family Membership will drop from \$40 to \$30 per year. A Family Member does not receive *Amateur Radio* and is a second or further person living at the same address as a Member or Concession Member receiving *Amateur Radio*.

The Board hopes that this will encourage more people living at the same address to become WIA members.

Also, from 1 July 2007, the WIA will no longer offer membership without the magazine, *Amateur Radio*, except as a Family Member. Existing Non-AR memberships will continue.

The Board believes that while the WIA communicates with its members in a number of ways, including broadcasts and the WIA website, the non-AR membership is no longer appropriate as the magazine is the only way that the WIA can directly communicate with all members who receive it.

WIA forced to increase the cost of its examination/assessment service

After 30 June 2007, the cost of all assessment packs will be \$35 per pack.

This new rate applies to assessment packs for the Foundation qualification (which includes theory, regulations and a practical assessment), the Standard and Advanced Regulations and the Standard Theory and Advanced Theory.

The practical assessment taken alone will increase from \$20 to \$25.

A detailed review shows that each pack, including return processing, costs more than is recovered and so other WIA income has been subsidising the WIA Examination Service.

The increase is for all assessments conducted from 1 July 2007, irrespective of when the pack was produced.

Karl Hennig VK6XW new Intruder Watch Coordinator

Karl Hennig VK6XW has been appointed Intruder Watch Coordinator by the WIA Board to replace Glenn Dunstan VK4DU, who retired at the recent WIA AGM. Karl is an active supporter of the intruder watch system and brings many years of experience to the task of protecting the amateur HF bands

from interference from non-amateur intruders.

Full details of the WIA Intruder Watch system are available on the WIA Web site.

The success of Intruder Watch in protecting the access of Australian amateurs to the HF spectrum depends on the support of active amateurs willing to submit formal reports about interference.

New National Standard built around Amateur Radio

The Commonwealth Department of Education Science and Technology has endorsed a new competency standard, called "Operate and maintain an amateur radio communication station".

The standard approximates the syllabus for a Standard amateur operators certificate of proficiency.

There is now a nationally recognised standard built around amateur radio. This is a link between amateur radio and education and industry. Competency to this standard can be an element in an electro-technology qualification.

It should make amateur radio activity much more attractive to schools.

However, it is important to note that holding the competency will not qualify the holder for an amateur licence, which still requires WIA certification to ACMA of competency in the theory, regulatory and practical elements of the syllabus.

WIA Open Forum Reports

Following the outstanding success of the Parkes AGM weekend in May and continuing requests for copies of the reports presented at the open forum, WIA Director Robert Broomhead has announced that copies of the bound Open Forum Report Booklet are available to members and affiliated clubs for \$10 per copy, including postage.

Contact the WIA office.

WIA participates in New Zealand Conference

WIA President Michael Owen VK3KI and WIA Director Phil Wait VK2DKN attended the NZART Annual General Meeting and Conference held over the New Zealand Queen's Birthday weekend, this year at Palmerston North.

NZART and WIA have for many years exchanged visits, leading to significant

cooperation and understanding.

Phil Wait gave a presentation on the Australian experience of BPL, and Michael Owen told of the changes in Australia over the last two years since his last visit to a NZART Conference, stressing particularly the increase in the number of amateurs and WIA membership since the restructure of the Australian licences

WIA Director delivers BPL presentation to 2007 IIR FleetMobile Conference

WIA Director Phil Wait VK2DKN delivered a presentation on BPL to the IIR 2007 FleetMobile conference held at Star City in Sydney, over the 28-30th of May.

The conference was attended by about 100 executives and business managers responsible for communications and IT in Government Radio Networks including State, Federal and New Zealand Police, Fire Departments, Defence, Emergency Services, and representatives from ACMA and a number of commercial organizations.

The theme of the conference was the converged future of communications - realizing significant operational benefit by achieving intelligent mobile communications strategies.

This was a valuable opportunity for the WIA to highlight its concerns about the potential for BPL interference to HF radio communications. As Phil stated, "the unique thing about HF radio is that, unlike other newer technologies, it does not require infrastructure which can easily be destroyed in times of disaster or conflict. There will always be a place for HF radio and its utility must be protected".

2007 WIA Club Grants Scheme

Monday 16th July is the closing date for applications for the WIA Club Grants Scheme for 2007. Full details of the rules for the scheme can be obtained from the WIA Web site, together with a template setting out the suggested application headings for an executive summary, identifying how the club seeks to meet the objectives of the scheme and guidance regarding supporting documentation.

Experiments with various wire antennas

Felix Scerri VK4FUQ

Over the last year or so, several individual antenna evaluations at this QTH have 'morphed' into a wider series of experiments dealing with the general performance parameters of various simple wire antennas, noise pick up and enhanced methods of feeding.

The experiments have been conducted mainly on 20 m, comparing a simple inverted V dipole, against a single full (one) wavelength loop, itself configured as either a delta (equilateral triangle) or a diamond (square) shape. Other more limited experiments involving noise pick-up characteristics have also been conducted on 40 m and 80 m.

General power line (and other noise) has been a long time problem at this QTH, and much of this recent (and ongoing) research has been aimed at finding methods of optimising antenna signal/noise ratio. One obvious conclusion, all other things being equal, is that antennas that are 'nominally' balanced are inherently superior through the effects of 'common mode' noise rejection, although many antennas that appear balanced at first sight are actually only 'quasi-balanced' on closer inspection. I am also satisfied that noise pick up can be reduced further if steps are taken to improve the overall 'balance' of the antenna. This is not surprising as, for example, in the professional audio field, true 'balanced' circuitry is a highly prized characteristic, especially when working in an 'electrically noisy' environment.

I have been rather impressed by the capabilities of 'current mode' or 'choke' baluns in enhancing (current) balance on antennas. A most enlightening article by Roy Lewallen W7EL (Ref 1) details many interesting experiments between different balun types and comparison results. My own recent tests support the general conclusions and findings in that article. My observations also support the notion that current mode baluns can be placed in rather unconventional places in a feedline and still perform well.

Lewallen has shown that simple 1:1 current mode baluns do seem to be able to provide better current balance into a balanced load and my own measurements also indicate that this unique ability results in detectably lower noise pickup,

presumably through enhanced 'common mode' noise rejection. One of the other interesting observations in the Lewallen article was the mention of 'incidental' asymmetry in the test antenna, something more than likely to occur in most (if not all) practical antenna installations, due to such things as antenna tilt, coupling to nearby objects, feedline interaction, and so on.

This real world antenna 'reality' leads to interesting, if slightly unconventional, possibilities and solutions. I have long been an advocate of using high impedance balanced feeder as a 'tuned line' and using conjugate matching (an ATU) in the shack. However, the presence of some inherent asymmetry, even in a nominally balanced antenna system raises the possibility of using a simple 1:1 current mode balun at the feedpoint (or elsewhere) of an antenna even when fed with balanced feeder, as a means of at least partially correcting for this incidental asymmetry. I have tried this and the results have been positive, with a small, but detectable reduction in noise pick up and no adverse effect on general performance. The possibilities are indeed very interesting!

The use of a feed point position 1:1 current mode balun seems highly beneficial regardless of the type of antenna being used. I have even used a 1:1 current mode balun to assist in feedline decoupling in a nominally 'unbalanced' antenna system (a quarter wave vertical with a resonant counterpoise system); however their use with already nominally balanced antenna systems such as dipoles, inverted V's and full wave loop antennas seems particularly advantageous for the reasons already outlined.

Further to this, it would appear that, based on observations made at this QTH, the use of a 1:1 current mode balun gives superlative results when teamed with a full wave loop antenna. Comparisons made on one very noisy (power line

noise) afternoon when a current mode balun was fitted to a fixed wire Quad loop, were rather incredible. With the balun out of circuit the horrible buzz of power line noise was very apparent, however when the balun was placed in circuit, not only was the general level of the noise noticeably reduced, but its 'sound' had also considerably changed. The 'buzz' had been replaced by a much more tolerable 'hiss', sounding much like the so-called 'pink noise'. Why this apparent 'synergy' occurs requires more investigation but the effect is real!

Just further on loops, I have found one other application that might be considered somewhat scrupulous, and that is using the 20 m loop as a separate receive antenna for 80 m! There are times when the power line noise on 80 m is so strong that even 'local' stations are essentially unreadable when listening on the (transmit) dipole, yet listening on the 20 m loop fed into a separate communications receiver, the noise cancellation through the 20 m loop is extremely impressive and copy is very easy as a result! Only my 20 m loop seems to possess this quasi-magical quality!

In concluding, although I concede that my evaluations have not been exhaustive or complete, they have certainly shown that there are interesting new ways to think about old problems. As much as power line noise is painful in the extreme, at least it has led to some interesting research, so maybe it's not all bad! 73.

Reference 1:

Baluns: What They Do And How They Do It Roy Lewallen W7EL. The article is available via <http://www.qrp.pops.net/>, which is also an excellent website for the ham radio constructor.

(If not available on this site, try using Google to search for the above title - Tech Ed.)

A magnetic loop antenna

Wil Hillebrand PE1LKT,

Panneslagerstraat 2,

6369AS Simpelveld, Netherlands.

Published in 'Electron', May 2005.

Translation by John Lauten VK4VK

tenalu@tpg.com.au

My interest in this type of antenna goes back some years after attending a lecture and demonstration on the subject, which wasn't really a success since the antenna didn't work as planned.

Actually, little is known about this antenna - whilst the principle is quite old, many odd stories did and still do the rounds.

Calculations and construction

At that time I owned a computer programme designed for loop antennae, called 'T-loop'.

Input requirements consisted of such items as size, whether round, square or hexagon.

Based on these details, the programme

works out the size of the capacitor and the plate size and its spacing.

Say you select a loop diameter of three feet (the software calculates in imperial), the circumference calculated is: $3 \times 12 \times 25.4 \times 3.14 = 2871$ mm.

[Where:

3 is the diameter (in feet)

12 inches per foot

25.4 millimetres per inch and

π is approximately 3.14

The actual formula is

$C = \pi D$]

This is the size I chose to make the loop square with the side measuring 800 mm. (Figure 1 and Photo 1)

The selected material consisted of 22 mm copper tubing, with 90 degree solder joints to make a square. It may be better

to manufacture the square out of one piece of tubing long enough, but that requires special tools that I did not possess.

Aluminium tubing is an option but that creates soldering problems.

I decided on the size of the loop with the aid of the software, varying the required operating frequencies. This resulted in varying values for the tuning capacitor, in my case from 7 to 400 pF in order to operate from 10 metres to and including 40 metres - more about this later.

The coupling inductor (coil)

is made from 6 mm copper brake line as used on older type automobiles (6 mm soft drawn solid wire would also do the trick). The coupling is provided with an SO239 connector to connect coaxial cable. The length of the coupling inductor should be 1/6th the length of the major loop.

Because these loops on HF appear as coils, and can be considered as such, an impedance transformation results - see Figure 1. The coupling inductor is insulated by means of shrink tube and placed in a corner of the major loop connected in a mechanically stable manner. The major loop has an opening of 80 mm at the bottom and is rigidly connected to a piece of 'trespa' sheeting of about 6 mm thickness. I used plumbing fittings such as those used to connect taps to walls; a plumber would use these to connect 22 mm pipes. The three holes to connect the tap fittings come in handy for use of M3 hardware. The lot is held in place with nylon saddles as used by the same plumber - see Photo 2.

The tuning capacitor

A commercial tuning capacitor may be available but making one to suit is 'nicer'.

A capacitor is defined as two conductors separated by a dielectric. Determining the capacitance is no problem; you would have learnt that in studying for your exams.

In practice, it often works out differently. Theory says it should work and sometimes it doesn't, whereas a practical approach will sometimes.

Circuit board material is covered with a layer of copper and two pieces separated by air (dielectric) form a capacitor.

The required separation was determined by the above computer programme, bearing in mind the voltages across the plates.

Because the capacity needed to be in the order of 400 pF required too great a surface area, I subsequently choose to

Photo 1 Wil PE1LKT

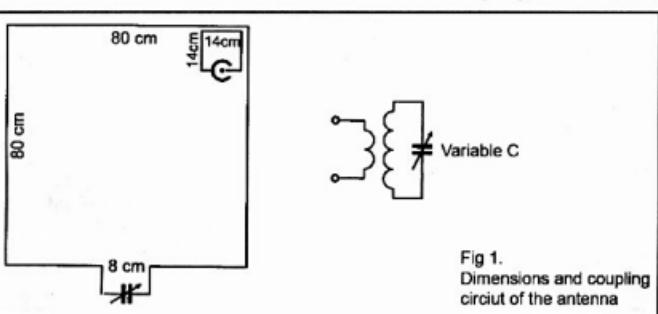


Fig 1.
Dimensions and coupling circuit of the antenna

Figure 1

manufacture a 'packet' of circuit board material consisting of five stationary and four movable pieces of double sided material separated by strips of plywood; 20 mm and 30 mm wide respectively. The wider strips are used to separate the stationary plates and the narrow ones to allow the movement of the 'packet' that will move in between the fixed plates (Figure 1 and Photo 2).

The fixed plates measure 210 mm x 170 mm and are provided with holes of 1.5 mm at their extremities. A wire is to be threaded through and soldered to the individual plates after assembly.

The movable plates measure 210 mm x 130 mm and with M3 threaded rod and M3 nuts manufactured in such a way that easy movement results between the plates. When satisfied solder the nuts to the circuit board. Measurement indicated a maximum of 400 pF, sufficient for my purpose.

The capacitor is mounted on a suitable piece of 'trespa' material at right angles to the 'trespa' plate supporting the loop. I made the connection from the capacitor with a flattened piece of co-axial outer cable. Melt some solder at the ends and pierce a hole large enough to allow an M3 bolt and connect to the loop, the fixed plates and the movable plates. An advantage of this type of capacitor over a conventional one is the lack of mechanical noise sometime resulting from dusty bearings.

Initially I connected a strip of Plexiglas to the movable plates to move, by hand, into the fixed portion of the 'packet', with pencil marks to indicate the settings for the various amateur bands. Tuning is simple and quick. Place the Rx somewhere in the middle of the band of choice, move the plates and upon approximate resonance, audible (noise) and noticeable ('S meter') the antenna is then ready to transmit. Fine tune for minimum SWR and 'Bob's your uncle'.

Results

I've made contacts [from the Netherlands] on all bands between 7 MHz and 30MHz with contacts to Argentina, USA and Brazil. European stations are readily contactable. The antenna is quite frequency wise, which has the advantage of suppressing stations close by in frequency. It's a very quiet

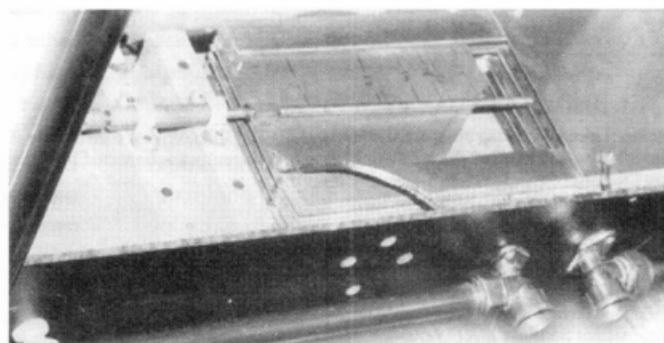


Photo 2: A nice bit of plumbing

antenna, less noise pick-up or QRN, even thunderstorms are hardly audible.

Costs have been kept to a minimum and there's much room for improvement.

In order to adjust the capacitor more easily, I connected a cordless screwdriver with a piece of M8 threaded rod that turns in an M8 nut, fastened to the movable plates with the assistance of a M3 nut. A spacer (washer) will aid in lining up for the correct height.

M8 has a turn ratio of 1.25 mm. ergo; it follows that for every turn the plates will move 1.25mm. A driver at 140 rpm will move the plates 175 mm. To insulate the screwdriver, I connected a piece of flexible hose material of suitable size between the drill and the threaded rod. At first I omitted this resulting in a burnt out cordless drill and its battery pack due to high RF currents. The connecting bit, being flexible assists in lining up the rod. The threaded rod is held in place by a piece of aluminium tube, inside diameter of 8 mm.

It is important to be aware of the high RF currents, and the high magnetic fields should not be ignored.

Other materials could perhaps be used. I used what was at hand; it does not have to appear as if made commercially. The

important thing is that the antenna functions well and that one gets to understand what one does and what one talks about and the satisfaction

(Translator's note: The magnetic fields produced by a Loop antenna when used indoors and close to the operator could/would create problems for those fitted with Pacemakers such as in my case).

Editor's note: John Lauten VK4VK advises the following: "Trespa is a trade name. The material is extremely hard and is the same material used in the type of flooring you may see advertised on the television. It looks for all the world like timber. It's very popular in Europe. I suppose you could substitute hardboard or 'burnie board', as long as it isolates and is strong enough to do the job."

ar

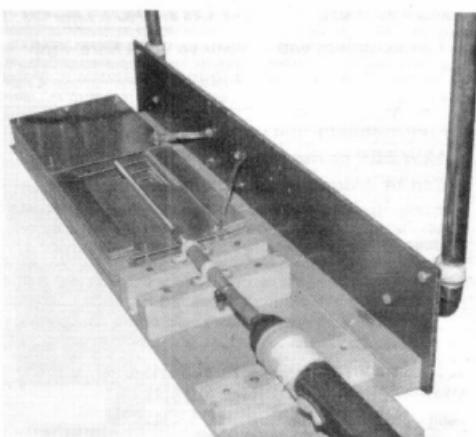


Photo 3: the condenser

Try this!

A noise cancelling graphic equaliser

Ivan Huser VK5QV

Before I moved into the present QTH, I did a HF noise check of the area using my TS-50S in the campervan. The results were very encouraging, with a less than S1 noise level on both 80 and 40 metres. I put this down to the area being serviced by an underground electrical distribution system. However, I must have caught it on a good day, as I have been plagued by a consistent S5 noise level ever since.

In an effort to counter the noise, I purchased a u-beat noise cancelling speaker which works well albeit with a lot of distortion when trying to retrieve audio from a signal right down in the noise. I rarely use the device now.

Some months back, I picked up a 'nifty' little graphic equaliser unit with inbuilt amplifier at a garage sale for the bargain price of one dollar. These units were designed to be used with car radios, and have been superseded by the modern 'boom boom' sound systems. I really didn't have a use for it at the time, but at a dollar, I couldn't resist the bargain.

I decided to try it out on the FT-

101ZD and 'bingo' what a difference it made. The unit was connected between the transceiver output and the station speaker, and powered from a 12 volt supply. By adjusting the slider controls, most stations can be pulled out of the noise and without the 'watery' distortion of the DSP speaker. All for a dollar.

The photograph shows the unit set up

for SSB. These settings, of course, can be tweaked for individual conditions. Since getting my dollar bargain, I have seen several similar units at garage sales varying in price from \$2 to \$5, so if you too are plagued by noise, get out there and haggle. It's surprising what a little boost and cut can do.

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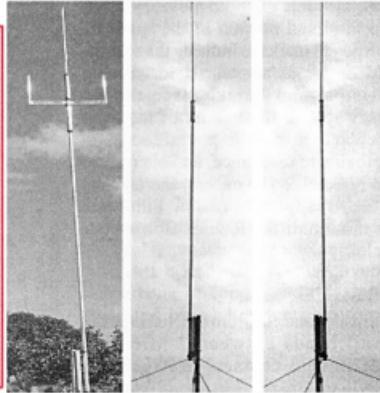
New

Tet-Emtron Vertical Range

TEV-4

TEV-3

TEV-3 Warc



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ELEMENT HEIGHT	4090 mm	3800 mm	5025 mm
FEED IMPEDANCE	50 ohm	50 ohm	50 ohm
Max. RADIAL LENGTH	10.7 metres	5 metres	7.5 metres
SWR	1.5 or less	1.5 or less	1.5 or less
POWER RATING	1 kW	1 kW	1 kW

A look at Norman VK7AC

Norman Deitch VK7AC
vk7ac@ozemail.com.au

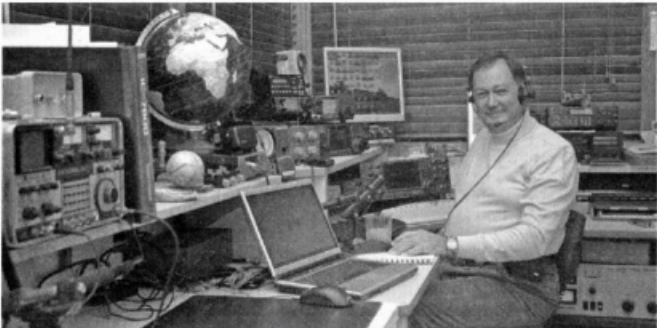


Photo 1: Norman VK7AC in his shack

My name is Norman Deitch VK7AC, ex
VK2XC and VK2ZXC.

I am a retired communications technician and rigger. I was first licensed in the early 1960's, when living in the Sydney suburb of Enmore, in the same street as two well known amateurs VK2ABO and VK2AVI.

I soon developed an interest in VHF communication, perhaps because I had an uncle who owned Deitch Bros Army Disposal store in Oxford Street, Sydney, which had plenty of Command and 511 aircraft transceivers available. I primarily operated on 2 metres and 6 metres simplex.

Shortly thereafter, I developed an interest in antenna design and tower erection techniques, leading to the creation of my own company erecting guyed and self supporting towers for government and private interests, to heights of 100 meters. My last job before retiring was the upgrade of the TV channel 9 antenna array at 300 metres – where I worked many stations on a 2 metre band held

Moving to Port Kembla in 1987, I erected a 45 metre self supporting tower on my property for commercial reasons, although the top was occupied with large

A black and white photograph of a single-story house with a gabled roof and a prominent chimney. The house has a covered porch on the left side. A utility pole with power lines is visible in the background on the right.

Photo 2: An external view of the VK7AC home and antennas.

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Mobile 80 metre antenna tests

Don Jackson VK3DBB.

Opinion is a wonderful thing, except that it does tend to blur the realities quite often.

Recently a gathering of amateurs was discussing the efficiencies and deficiencies of various whip antennas for mobile use, particularly on the 80 metre band, whilst nobody admitted that some were not as good as they were held out to be. So it was decided that one day we would get together and do a basic test, by installing in turn the several antennas owned by the group on the one mobile mounting. The received signal strengths could be measured at a site some distance away, where we had access to some pretty good test equipment. See Table 1.

By doing it this way, we would have the essential basics to produce a not necessarily thorough, but nonetheless

useful guide to the efficiency of the various types. It ensured that all antennas were:

- transmitting with the same power (CW),
- located in exactly the same place, and
- checked by reliable equipment, not just by "S" meter readings.

We do not claim by any means that this was a scientific test. We had eliminated some variables, but we had no reference antenna and we could not compare our results with theoretical answers. All we could assess was the relative received signal strengths in a specific situation. So we stress the subjective and amateur nature of the results we got, for fear of upsetting the theorists and bringing their wrath down upon our heads.

There were 10 antennas tested in all. They ranged from a home-brew hybrid, and included long, medium and short, centre and top-loaded whips, both commercial and home-brew. All were optimised for the test frequency used.

As could be expected, the two worst performers were the short, centre and bottom-loaded types, designed for centre-of-the-roof mounting.

Sometimes it is necessary to use one of these, especially if it is to remain on a car under a low carport. To keep their displayed waveforms at the designated reference mark on the receiving screen, we had to use an average of 10.5 dB less attenuation than for the best performer. Think of the power loss there!

The highest performer was the home-brew hybrid, so we have taken it as our reference (see Table 2). As could

Table 1 - Test set-up

Test frequency	3.640 MHz
Power	50 Watts (CW)
Radio path length	460 metres approximately
Terrain	Essentially line-of-sight Ground very dry
Test equipment	HP 8443A Tracking Generator/ Counter HP 8553B Spectrum Analyser HP 141GT Display Section

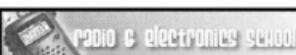
Table 2 - Test results

Received level (dB)	Antenna type
0.0	Hybrid home-brew: long
-1.1	Top-loaded home-brew: long
-1.6	Centre-loaded commercial: long
-2.2	Helical home-brew: long
-3.1	Commercial: long
-3.3	Centre-loaded commercial: long
-4.1	Commercial top-loaded
-8.1	Helical: short
-10.1	Bottom-loaded commercial: short
-11.3	Commercial: short

be expected, this was followed by the longer centre and top-loaded whips, with comparative results as tabulated.

So, the message is that if you want to get a strong signal out on the 80 metre band when mobile, use the longest whip you can get without shorting out overhead power lines. But we all knew that, didn't we?

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Amateur radio — a bridge to careers in radio communications technology

Discovering the delights of the **Regenerative Receiver**

Grant McDuling VK4JAZ.

I decided it was time to burn solder again and rediscover one of the aspects of our hobby that sadly seems to be fading.

I wanted to homebrew a simple regenerator receiver from odds and ends in my tool box. So I hopped onto the internet as one so often tends to do these days and soon came across Peter Parker's fabulous site at <http://home.alphalink.com.au/~parkerp/projects/>

I selected 'AM Broadcast Band Regenerative Receiver just two transistors', downloaded the instructions and I was in business.

The first job was to make sure I had all the relevant components on hand. What I didn't have, I made a short list and made my way to my local DSE store. Initially I had to make do with two plastic variable capacitors until I bucked up enough courage to strip an old antenna tuner I had that was surplus to requirements in the shack. The trouble was, the air variable cap I pulled out looked like it would be up to the task but had no markings on it to indicate what its rating was. I decided to use it anyway and experiment when it came to winding the coil.

Next job was to etch the PCB board. This was a straight forward, if messy, operation, but the result was pleasing enough. My intention, you see, was to construct the radio on a nice piece of timber so that I could admire the 'working parts' while listening.

Then came the fun part; mounting all the components into their places on the board. This took an hour or two and was most enjoyable. A quick check on completion revealed everything to be in the right places.

Next came the job of thinking about how the board and other hardware would be mounted. I had a nice piece of timber, which I cut to size and oiled. Then I selected a piece of aluminium, planned where I wanted to mount the various components that needed holes drilled, and got to work with the drill and reamer. I made mounting brackets for the ferrite rod from L shaped aluminium and drilled

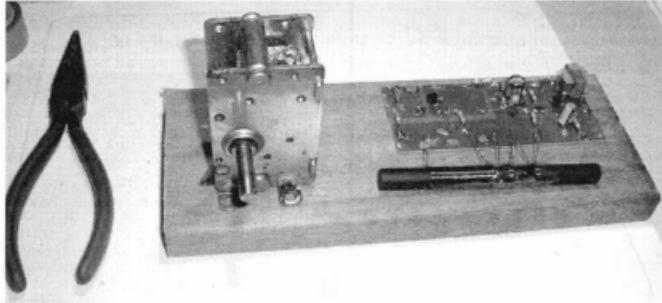


Photo 1: The regenerative receiver under construction.

the holes. The most challenging part here was measuring the distances for the mounting holes for the vernier dial on the tuning capacitor to be drilled.

The winding of the ferrite rod was easier than expected, but baring the ends of the 0.4 mm winding wire proved fiddly. Then it was time to mount the rest of the components. At the last minute I decided to include a switch and LED, with resistor, so that I could see when the 9 V battery was on. The reason I did this

was just for fun, really, and because I had one lying around in my junk box.

Then came the smoke test. I connected up the battery, flipped the switch and held my breath. No smoke but no signals either!

A quick check of the circuit board revealed that one leg of the transformer hadn't been soldered down. I fired up the iron once more and rectified that oversight.

Another flick of the switch produced

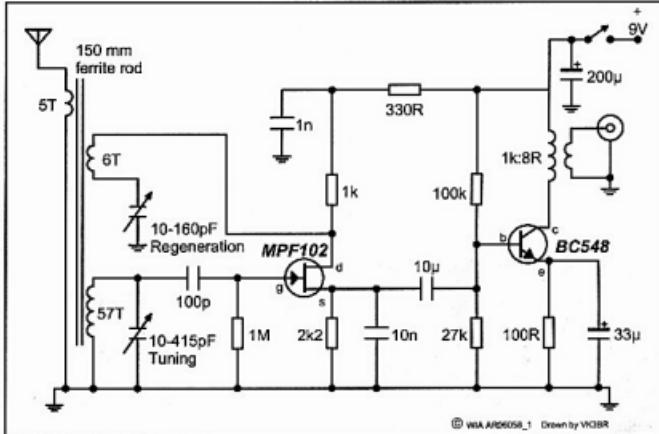


Figure 1: Schematic of the regenerative receiver

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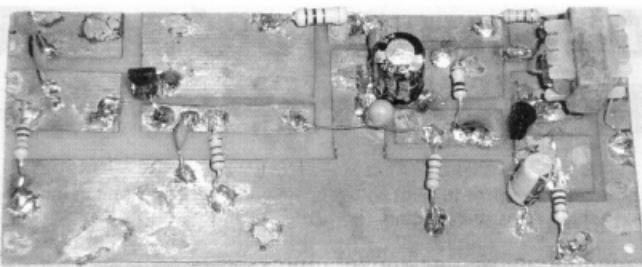


Photo 2: The regenerative receiver under construction

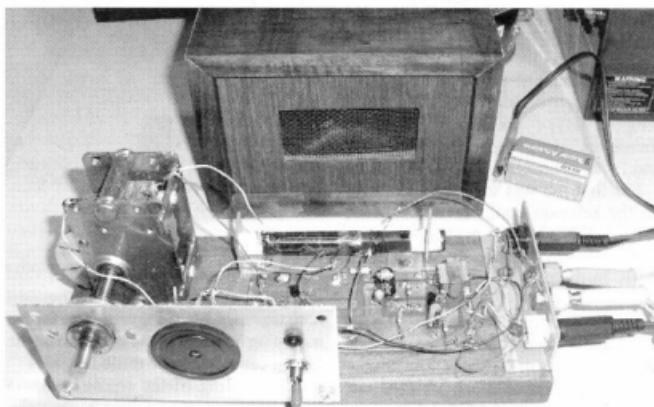


Photo 3: The completed regenerative receiver.

hissing noise. Life! Ah, what a sound.

I swung through the tuning range and the only signal with enough load to drive the 8 Ω speaker was a local ethnic station, but even though I couldn't understand a word, it was still music to my ears.

This was the only station I could hear, and it was sitting at the bottom end of the band. I figured that I needed to reduce the number of windings on the ferrite rod to bring in more stations. Out came the iron again and I unwound fifteen or

twenty turns. Now things were looking, or should I say sounding, better. More stations. I was well pleased. This little receiver was certainly very sensitive.

Since completing the radio, I have already had hours of fun listening to local BC stations.

But now I want more. Some of the interesting stations are so soft I can only really listen to them on headphones. So it's time to think about my next project - a simple audio amplifier.

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Remember
Remembrance Day Contest
August 11 and 12
ALAR Contests
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A VK1OD PIC Iambic keyer (PIK) made "Paddyboard" style

Drew Diamond VK3XU.

Way back in 1973, James Garrett WB4VVF outlined his Accu-Keyer (Reference 1). The Accu-keyer introduced many of us to the iambic* method of keying, and became one of the most popular projects for CW enthusiasts world-wide, and the bench-mark for numerous subsequent keyer patterns.

Several of my own examples of the Accu-Keyer have been in use here for at least 30 years, being my preferred auto sending instrument. So, when Owen Duffy kindly sent me a couple of his programmed 12C508A PICs to play with, it was a simple matter to build a "Paddyboard" model to try.

It is thought that the algorithm used in Owen's PIC iteration is identical to that of the Accu-Keyer (but with more accurate timing). The salient PIK features are automatic generation and timing of:

- dits
- dahs
- didahdidah strings
- duration of rest period after a dit or dah, and
- optional auto timing of the duration of inter-character rest period (auto-space).

In operation, the keyer behaves exactly like the Accu-Keyer, and performs faultlessly. My 58 year-old brain needed no re-adjustment whatsoever to produce precise, correctly timed Morse. The keyer suits transmitters where it is required that a low voltage positive level be pulled low to affect an output - which is the case for all known recently published solid-state transmitter patterns and contemporary transceivers. Older style grid-block or cathode keying will require a keying relay or other suitable interface. Speed range is about 10 to 40 w.p.m.

No side-tone oscillator is provided, as this feature is usually standard in current model transceivers. However, a simple, suitable practice oscillator/RF-actuated monitor may be found in Reference 2.

For a detailed description of the design criteria, implementation, software and algorithm, the curious are pointed to Reference 3.

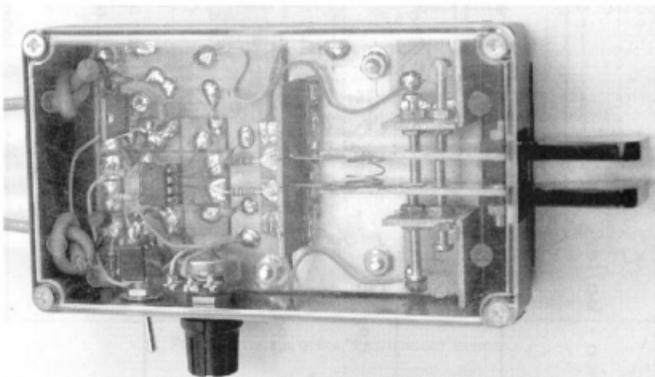


Photo 1: PIK keyer.

Construction

The specified PIC supply voltage range is 3 to 5.5 V dc, so a safe maximum would be 5 V, which may be derived from an ordinary 5.1 V zener diode (see Ref. 3), or a 5 V regulator chip, powered from 12 or 13.8 V (in which case the keyer draws about 5 mA), as illustrated in Fig. 1. Include a 500 mA fuse if the keyer is to be operated from a high-current source.

Or a battery of three 1.5 V AA cells (4.5 V) as shown optionally in Fig. 1 may better suit your set-up. The keyer draws only 1 mA when operating, and a tiny 2 uA when the chip goes into "sleep" mode (a battery switch is therefore not required). Remember to include a diode as indicated for reverse-polarity protection.

My example is neatly housed in a plastic box measuring 120 mm x 70 mm x 30 mm LWH (Photo 1). The assembly alone has insufficient mass to prevent it from "walking" about the operating table. Consider either: mounting the

assembly upon a suitably sized slab of metal (optional fixing lugs are provided with the suggested plastic box assembly) or, operate the keyer from a three-cell battery supply (which adds mass), where the holder may be fixed upon the top lid of the keyer assembly. Additionally, a 120 x 70 mm rectangle of computer mouse pad material may be glued to the underside to provide an improved grip upon the table.

A suggested Paddyboard (Reference 4) layout is pictured in Photo 2 and Figure 2. The PIC chip is accommodated in an 8-pin DIL wire-wrap socket, soldered to a 30 x 25 mm "substrate", which in turn is super-glued (sparingly) copper side upon the circuit board.

If you already have a suitable keyer paddle (independent "squeeze" type paddle contacts), then no additional device is required. One occasionally hears and reads hype about fancy/expensive paddles, when all that is actually required is a pair of opposed paddle operated contacts with sufficient sensitivity to be

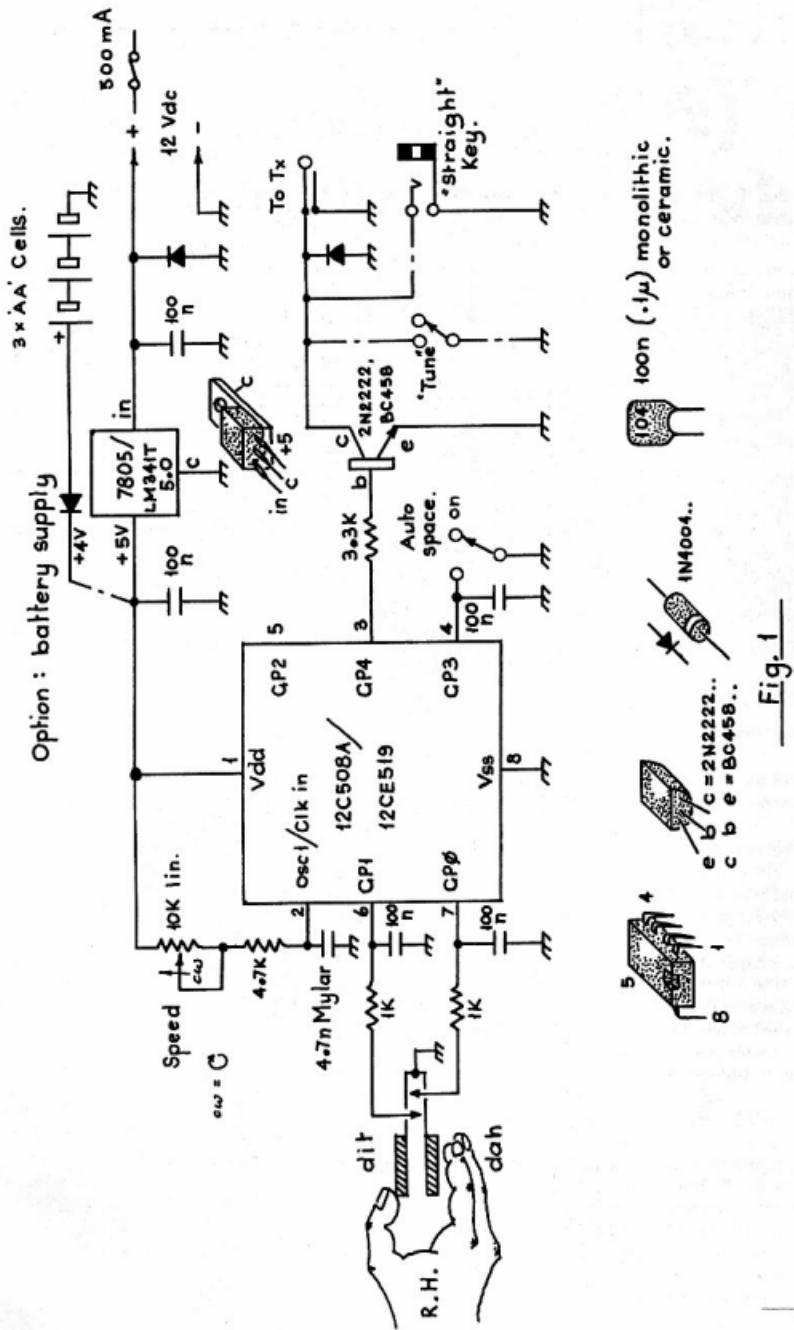


Figure 1: Circuit diagram of the keyer.

accurately manipulated by the fingers of any reasonably dexterous person.

Pictured in Photo 3 is a suggested gadget made from scraps of circuit board material, and is similar to the "scrap-box" paddle described in Reference 5. The circuit board is the same size as the PIC board - 65 x 50 mm. The contact arms are made from 45 x 10 mm lengths of single-sided board, attached to which are suitably sized and shaped paddle knobs made from Perspex, ABS or similar.

For the bendy pivots, I used 20 mm lengths of phosphor-bronze contact strip removed from an ordinary type 610 telephone socket. Dit and dah contacts are made from small pads of the same material, which are soldered upon the contact arms so that they align with their respective adjustable 3 mm nickel plated contact screws.

Dimensions are uncritical, but remember that the paddle assembly must fit snugly inside your chosen box. Individual components are displayed in Photo 4. Note that the dit and dah contact screws must pass through a corresponding clearance hole in the near arm to form a contact gap with the bronze pad on the far arm.

The right-angled pivot bracket may be slotted with a modeller's saw (Reference 4) to receive the two phosphor-bronze strips. Use squares of circuit board material for the adjustable contact/back-stop screw brackets. They are soldered together upon the top side of the horizontal part of the bracket (so as not to short to foil). Solder 3 mm brass hex nuts in four places for the contact/back-stop screws. The brackets are super-glued in position on final assembly.

Those bronze pivots alone may not provide sufficient back-stop tension, so a small compression spring, salvaged from a ball-point pen should be soldered (one end only) so that the arms exert a slight outward pressure against the back-stops.

Operation

Check your soldering for quality and accuracy, and that all components are correctly placed, and polarized items are connected right way round. Connect the keyer to a practice oscillator, or transceiver's key socket (observe polarity). Power up and verify that the auto dots, dahs and iambic "squeeze" functions are working.

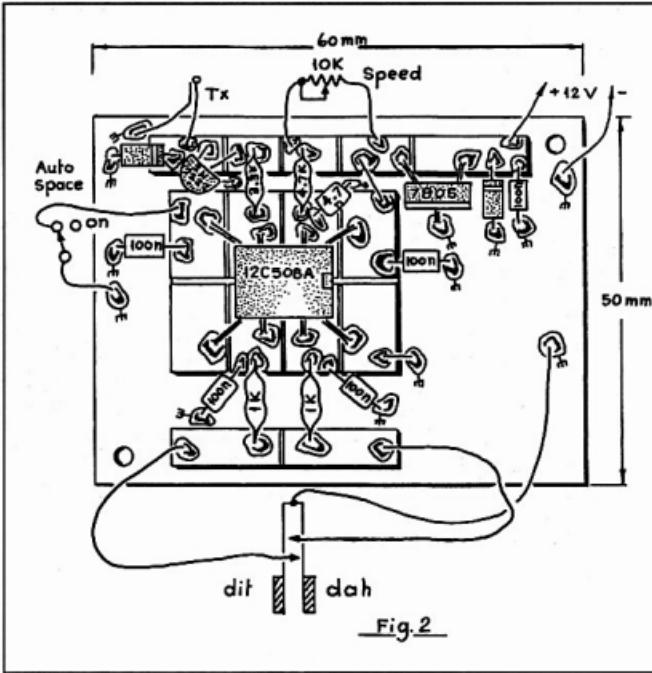


Figure 2: Details of the "Paddyboard" layout.

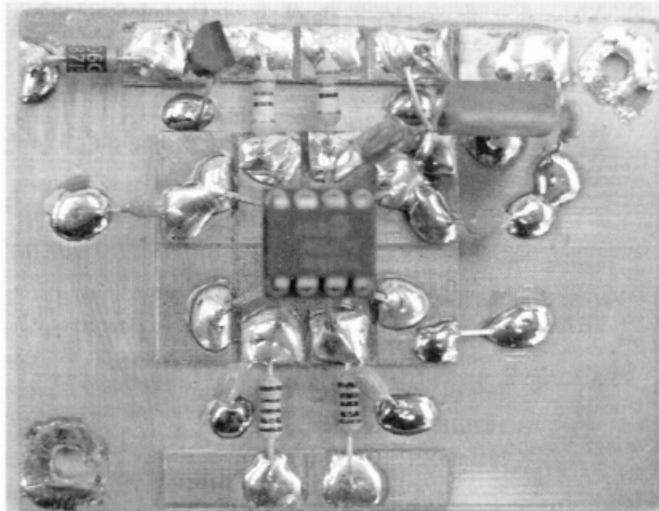


Photo 2: "Paddyboard" layout.

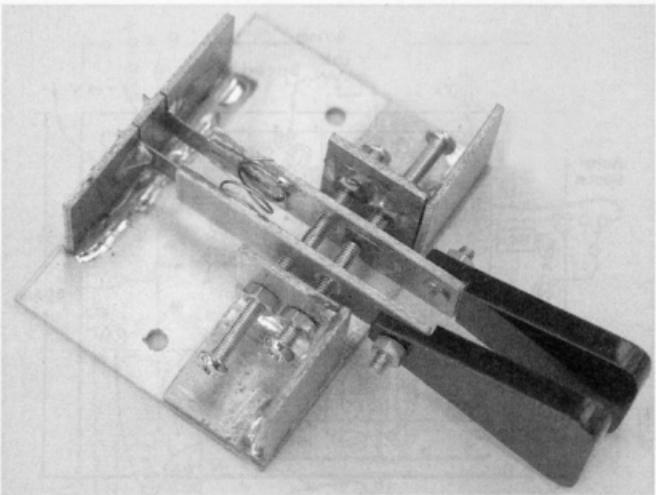


Photo 3: Paddle assembly.

If you are new to auto electronic keying, practice off-air (dummy load) until at least a reasonable proficiency is obtained. Don't worry too much about the iambic mode initially, for you should find that gradually and subconsciously, characters such as C, Q, K, R, message begins (CT), message ends (AR), and full-stop are intuitively produced by a simple squeeze action.

Auto-space is a handy feature, particularly if you are perhaps inclined to crowd characters together (a habit that some operators drift into - especially when rushed). Auto-space ensures a minimum inter-character space whenever any attempt is made to follow through a tad too quickly.

Always remember; the mark of a good Morse operator is sending that is not necessarily fast, but is properly spaced, rhythmic, and contains the correct sequence of dits and dahs for each character.

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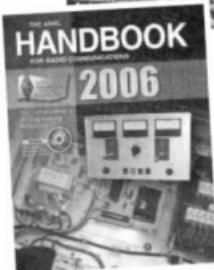
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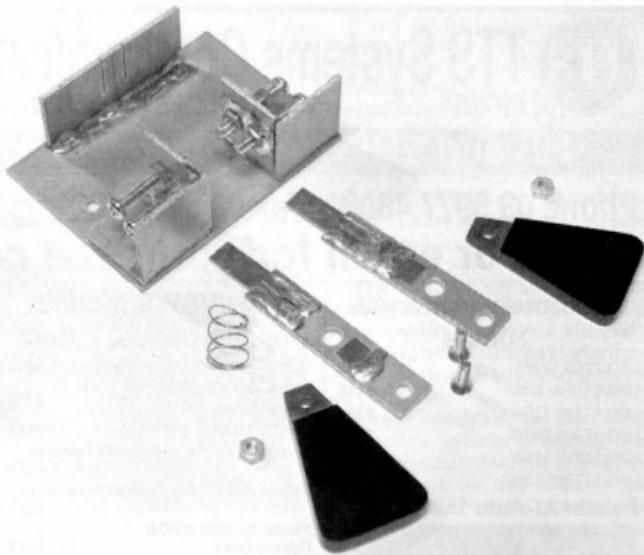


Photo 4: Paddle components.

Please see Reference 5 for further notes on electronic keying, and Reference 7 for hints on contemporary CW/Morse operating customs.

Parts

The keyer is based on the "PIK" keyer chip by Owen Duffy (VK1OD), firmware for which is available for download at no cost from Owen's PIK web page at <http://www.vk1od.net/pik>. For those without facilities to "burn" a chip from the hex file, programmed chips can be ordered from the web page for a modest cost - see the web page for details.

The ordinary electronic components are obtainable from the well-known suppliers, including Altronics and Jaycar. The suggested plastic box is a Jaycar P/N HB6082, although other similar suitable boxes are available from other vendors.

A 7805 1 A regulator chip is over-kill in this application, but I have used it because the smaller low-power 78L05 are not always obtainable.

10 k Ω speed pot may be a miniature type, which fits nicely just near the PIC chip, visible in Photo 1.

References and further Reading

1. "The WB4VVF Accu-Keyer"; J. Garrett, WB4VVF, QST, Aug. 1973 (also ARRL H'book, 1974).
2. "An RF-Actuated CW Monitor and Practice Oscillator"; Amateur Radio, May 2001.
3. "PIC Iambic Keyer"; <http://www.vk1od.net/pik/pik.htm>
4. "Paddyboard" circuit construction - Revised"; Amateur Radio, May 2005.
5. "An Electronic Keyer Paddle from "Scrap-Box" Parts"; Amateur Radio, July 2001.
6. "VK3XU's PIK with Integral Iambic Paddles"; <http://www.vk1od.net/pik/vk3xu/index.htm>
7. "Brush-up your Morse and join in the action"; Amateur Radio, Aug. 2003.

*"Iambic" comes from poetry, where the verse has a di-dah-di-dah rhythm, which is what we get when the keyer paddles are skillfully squeezed together to produce characters such as C, K, Q, R and Y, thus requiring fewer wrist movements than for an ordinary electronic keyer.

Teaching amateur radio classes

Graeme Scott VK2KE

With the advent of the Foundation Licence, there has been an upsurge in amateur operators teaching classes in the theory and practical levels of the new licence and indeed there is also an apparent increase in 'upgrade' classes being taught in many clubs and centres.

VK2KE was a radio and electronics teacher/trainer in the 1980s and '90s and has compiled these tips on how to make the teaching and learning exercise more efficient and enjoyable for all concerned.

Here are some teaching tips for radio clubs, et al, to use when teaching classes:

1. Ice breakers.
2. Communication – one way and two way.
3. Session planning.
4. Sessions - how to conduct effective ones.
5. Varying the activity.
6. Use of teaching aids.
7. Timing.
8. Sequencing.
9. Testing and evaluating.
10. The learning environment.

Ice breakers

When a small group comes together for the first time, it is worthwhile to help everyone get to know each other better. Later on, when the operators have passed the exams, and in a QSO, they will have some rapport already established with each other from the class.

This will also build rapport with members in an area who may belong to, or wish to join, a radio club.

An 'ice breaker' that works well is to get each person to talk to their class neighbour and to obtain basic personal information on the person. After a short time, the role is reversed and they exchange basic personal info with the other person sitting next to them. This is written down and each person then has to report the information on each neighbour so the whole group can hear the details and by this means get to know who is in the class with them.

Communication

Communication in a small group can tend to be one way, especially with a presenter/teacher who has little or no teaching experience.

Often the communication is by speech alone and this is a sure way to bore the listeners quickly. The teacher must be aware that the attention span of the class candidates is relatively short, so talking for long periods is not the best way to go.

Questioning

Because the tendency by many (usually inexperienced) teachers is to talk consistently, the flow of information tends to be one way. It must be remembered that the attention span of most people is typically 10-15 minutes. It's even worse just after lunch, as we all know!

The best way to make the whole session more interesting is to make it as interactive as possible and one really good way to do that is to ask questions. Well framed questions will spark interest and involvement of the class as a whole and will help break down the problem of the attention span waning – which it will always do inevitably, with any class.

The good teacher will ask many questions during a session and the students will contribute inputs that can make the session flow well, besides keeping everyone involved as much as possible.

Probably the best way to ask questions is to ask them of the whole class and not target anyone in particular as it may catch someone on the hop and that can be possibly counterproductive.

The questioning process will help develop the session and, if directed well by the teacher, will move the session along. It keeps everyone involved and opens up some discussion. The retention by the class of the information will be greatly enhanced by this means. You can even use the responses from some students to clear up any misconceptions they might have.

You can't underestimate the value of a

questioning process in making a session go along really well.

Varying the activity

As the attention span of most people is about 10-15 minutes, it's important to vary the activity during a teaching session.

You can present information by a variety of means:

- the whiteboard,
- the data projector or
- overhead projector and
- via handout sheets.
- As well, you can pass around real objects for the class members to see and touch.

In addition, it's a really good idea to give the class a break of, say, 5 minutes every hour. Let them get up, do some gentle exercise, have a loo stop, or a short walk around then back to it again.

You'd be surprised how the attention span is revived by giving short regular breaks. I proved that repeatedly in Melbourne with Morse code classes, where the attention span and concentration waned quite quickly after only a relatively short period. The use of frequent short breaks was the answer. Results came right up after each short break.

Teaching aids

We have a number of teaching aids available to us in radio:

1. a whiteboard or blackboard.
2. the data projector.
3. handout sheets.
4. real objects.
5. a demonstration.
6. a reference to a certain page in a book (e.g. the training manual).

A good teacher will access almost all of the above aids to make the session

more interesting and lively. The name of the game is variation and realism.

Timing

Timing is always an important factor. We need to be able to assess the amount of material we have to cover and the time we have available to cover it in. As well, some key points may need a little more time to get across than others, so allow for that too.

Another issue is that a lot of interaction and discussion may take up time. We may have to curb discussion in the interests of getting through the course in the time we have allocated. An example of this is the experience at the Twin Cities Radio Club, in that we can comfortably cover the whole Foundation Licence course in one day from 0900 to 1700 with short breaks for morning tea, lunch and afternoon tea. The exams are then given on the next day.

Sequencing

The order in which points of theory are covered can vary greatly and with each class you may tend to do it a little differently each time. However, the Foundation Manual is laid out in a pretty logical order and it may be best to stick to it carefully, at least on the first time you conduct the class.

Radio theory is often in 'building block' format and later stuff builds on what you have covered earlier. (A bit like building a house from the foundation up – pun intended!).

Testing and evaluation

All courses usually have a test or exam or some kind of assignment attached to them.

The amateur radio courses have a theory and regulations exam and practical assessment to verify that the student is competent in all aspects of the course. This is to ensure that new operators know what they are doing when it comes to putting a transmitter on air and begin speaking to other operators on our authorised bands.

The test can be daunting to a number of people who do not like exams or who do not perform well in the 'exam' environment. Some people have dyslexia and others have a huge nervous attack or the like when confronted with an exam. We also can possibly expect to meet people with some learning difficulties and some disabilities.

At the Twin Cities Radio Club, we had a class recently where one student expressed some concern about being able to do the theory exam. We reassured him and told him to have a go as the paper only has 25 multiple choice questions and that no-one had failed yet over a number of classes. As it turned out he passed with no problems. But if he had failed (actually given "not yet competent"), we were all set to arrange a Nominated Assessor to give him an individual exam and to give him special consideration.

Evaluation is not to trip up people or to put up 'barriers' but is there to ensure that people have achieved a required standard before they are granted a licence. The system of the 25 question theory paper and the new practical test is an excellent way to assess competence and certainly seems to be working very well indeed. We should be very proud that the system has reached this stage where people do not any longer have the old difficult barriers to enter the hobby.

The learning environment

The classroom can have a number of aspects that can help or hinder learning:

1. The temperature – the teacher needs to ensure that the students are comfortable, so attention to the heating and cooling is essential. The teacher needs to be aware that the students are sitting for a considerable period of time and that while the teacher can move around a lot, the students are stuck in their chairs. So they can become too hot or cold (or numb in the bum) and their comfort needs to be watched.
2. Lighting – the lighting needs to be set up so the whiteboard and other media can be seen clearly by all members of the class. Many teachers place the overhead projector on a table and so the lens sits right in front of the screen and makes it difficult for all effectively to see the screen properly. The remedy is to place the projector on a lower table to drop the lens out of the line of sight to the screen. The lights directly above the screen can often be dimmed or turned off for best visibility for the class - otherwise the image has

poor contrast and is difficult to see by class members.

3. Seating – the seating needs to be arranged so that all can see the teacher, the screen and other media properly. The chairs in some rooms are not very comfortable and the teacher needs to be aware of that and make whatever arrangements he can to ensure comfort for the students as they can be seated for long periods without much relief. The teacher also needs to be aware that the sun moves across the sky and often visibility of the screen is good in the morning but poor in the afternoon and so the blinds or curtains may need some adjustment as the day progresses.
4. Noise and distractions – the classroom needs to be as free of extraneous noise and distractions as possible, so the teacher needs to be aware of any that might hinder the learning process.

5. Monotone presentation – if the one teacher does all the presenting, the class can easily be put off to sleep. The same old voice going on for long periods is not good, so if a number of teachers take it in turns to present the sessions, the class attention span will be improved and the learning optimised. The teacher can also concentrate on some voice development so the voice is modulated and sounds more pleasing to the ear. Try listening to some ABC TV and radio presenters and note how they make their voice presentations more interesting and lively.

6. Good toilet facilities are an essential part of the students comfort.
7. Tea, coffee or whatever – the kitchen can play an important role in 'creature comfort' too, as breaks with a drink are a vital part of keeping the session flowing with a high attention level from the students.

I hope all of the above will serve to make the teaching and learning process much more effective for all teachers and classes. They are principles we used to teach to trainee teachers at Hawthorn Institute of Education, originally known as the Technical Teachers College.

ar

Gridsquare Standings at 4 May 2007

144 MHz Terrestrial

VK2FLR	Mike	113
VK3NX	Charlie	106
VK2KU	Guy	102
VK3KAI	Peter	84
VK22AB	Gordon	78 SSB
VK3HZ	David	76
VK2KU	Guy	69 SSB
VK3PY	Chas	69 SSB
VK2DVZ	Ross	68 SSB
VK3CY	Des	68
VK2TK	John	62
VK3EK	Rob	62 SSB
VK3QM	David	58 SSB
VK7MO	Rex	58
VK2EI	Neil	57
VK3BJM	Barry	55 SSB
VK3BQL	Mike	51 SSB
VK32LS	Les	51 SSB
VK3KAI	Peter	50 SSB
VK3WRE	Ralph	50 SSB
VK2KU	Guy	47 Digi
VK3CAT	Tony	46
VK4T2L	Glenn	45
VK5BC	Brian	43 SSB
VK3VG	Trevor	41 SSB
VK4CDI	Phil	40
VK7MO	Rex	39 Digi
VK7MO	Rex	38 SSB
VK3KAI	Peter	36 Digi
VK2TK	John	35 SSB
VK4CDI	Phil	35 SSB
VK4KZR	Rod	35
VK3CAT	Tony	33 SSB
VK3ZUX	Denis	33 SSB
VK6HK	Don	33
VK2KOL	Colin	32 SSB
VK2MJS	Mark	31 SSB
VK3DMW	Ken	31
VK3ZYC	Jim	31
VK3HF	Rhett	29 SSB
VK2KRM	Leigh	28 FM
VK3CJJK	Chris	26 SSB
VK2EAH	Andy	27
VK2TK	John	27 Digi
VK1WJ	Waldis	26
VK2TG	Bob	26 SSB
VK3ACC	Gordon	26 SSB
VK5ACY	Bill	26 SSB
VK3BBB	Brian	25
VK5BCP	Brian	25 SSB
ZL3TY	Brian	24
VK3TLW	Mark	23 SSB
VK3YB	Phil	23
VK4KEME	Allan	23
VK3HV	George	21 SSB
VK1WJ	Waldis	20 Digi
VK3G8G	Ed	20 SSB
VK6KZ	Wally	20
VK3AL	Alan	18 SSB
VK3UDX	Geoff	17 SSB
VK4T4J	John	17 SSB
VK2EAH	Andy	16 SSB
VK4CDI	Phil	16 Digi
VK4KEME	Allan	16 Digi
VK6KZP	Wally	16
VK3ZYC	Jim	14 SSB
VK2EAH	Andy	11 Digi
VK2EI	Neil	11 Digi
VK3VHF	Rhett	11 Digi
VK4KEME	Allan	9 SSB
VK5DXI	Mirek	6
VK6HK	Don	6 Digi
VK1WJ	Waldis	5 SSB
VK1WJ	Waldis	4 CW
VK4JAZ	Grant	2 FM
VK3QJM	David	1 Digi

144 MHz EME

VK2KU	Guy	245
VK2KU	Guy	231 Digi
ZL3TY	Bob	208
VK7MO	Rex	154 Digi
VK2FLR	Mike	120
VK3XAH	Ian	89 Digi
VK4CDI	Phil	74 Digi
VK3CY	Des	70 CW
VK2AWD	Dave	52 Digi

432 MHz Terrestrial		
VK2KU	Guy	39 CW
VK2KRR	Leigh	30
VK3HZ	David	17
VK3VHF	Rhett	13 Digi
VK3NX	Charlie	5
VK4EME	Allan	4 Digi
VK2DVZ	Ross	2
VK3AXH	Ian	2 CW
VK3AXH	Ian	1 SSB

1296 MHz EME		
VK3ZLS	Les	26 SSB
VK2KU	Guy	25
VK3EK	Rob	20 SSB
VK3KAI	Peter	20
VK3KAI	Peter	19 SSB
VK3KWA	John	19
VK2DZV	Ross	18 SSB
VK3WRE	Ralph	17 SSB
VK3BDL	Mike	14 SSB
VK3H2	David	14
VK3BJM	Barry	13 SSB
VKTMO	Rex	11 SSB
VK2TK	John	10 SSB
VK3BG	Ed	10 SSB
VK3UDX	Geoff	10 SSB
VK4KZR	Rod	10
VK3TLW	Mark	8 SSB
VK3AL	Alan	7 SSB
VK4T2L	Glenn	6
VK3HIV	George	5 SSB
VK3ZUX	Denis	5 SSB
VK3ZYC	Jim	5
VK4TK	John	4 SSB
VK6KZP	Wally	5
VK2KRR	Leigh	4
VK3WRE	Ralph	4
VK3BVP	Shane	4
VK3VHF	Rhett	4 SSB
VK3BY	Phil	4
VK3UDX	Geoff	4 SSB
VK3CJJK	Jim	4 SSB
VK4CDI	Phil	4
VK6KZ	Wally	4
VK2TK	John	3 Digi
VK3QJM	Brian	3
VK4CDI	Phil	3 SSB
VK6DXI	Mirek	3
VK4FRL	Mike	2
VK3CJJK	Chris	2 SSB
VK4CDI	Phil	2
VK6KZ	Wally	2
VK3CY	Des	2
VK3DMW	Ken	2
VK4T2L	Glenn	2 SSB
VK6KZ	Wally	2
VK3TLW	Mark	2 SSB
VK3ZYC	Jim	2 SSB
VK5ACY	Bill	2 SSB
VK2EI	Neil	2 SSB
VK3BJM	Barry	2 SSB
VK3DMW	Ken	2
VK3ZUX	Denis	2 SSB
VK7MO	Rex	2
VK7MO	Rex	1 SSB
VK4KZR	Rod	1
VK4T2L	Glenn	1

1296 MHz Terrestrial		
VK3ZLS	Les	26 SSB
VK2KU	Guy	25
VK3EK	Rob	20 SSB
VK3KAI	Peter	20
VK3KAI	Peter	19 SSB
VK3KWA	John	19
VK2DZV	Ross	18 SSB
VK3WRE	Ralph	17 SSB
VK3BDL	Mike	14 SSB
VK3H2	David	14
VK3BJM	Barry	13 SSB
VKTMO	Rex	11 SSB
VK3BG	Ed	10 SSB
VK3UDX	Geoff	10 SSB
VK4KZR	Rod	10
VK3TLW	Mark	8 SSB
VK3HIV	George	4 SSB
VK3CJJK	Jim	4 SSB
VK3QJM	Brian	3 SSB
VK3ZYC	Jim	3 Digi
VK3VHF	Rhett	2 SSB
VK3AL	Alan	2 Digi
VK2DZV	Ross	1 SSB
VK7MO	Rex	1 SSB
VK3HIV	George	1 Digi
VK3TLW	Mark	1 SSB

1296 MHz EME		
VK3ZLS	Les	26 SSB
VK2KU	Guy	25
VK3EK	Rob	20 SSB
VK3KAI	Peter	20
VK3KAI	Peter	19 SSB
VK3KWA	John	19
VK2DZV	Ross	18 SSB
VK3WRE	Ralph	17 SSB
VK3BDL	Mike	14 SSB
VK3H2	David	14
VK3BJM	Barry	13 SSB
VKTMO	Rex	11 SSB
VK3BG	Ed	10 SSB
VK3UDX	Geoff	10 SSB
VK4KZR	Rod	10
VK3TLW	Mark	8 SSB
VK3HIV	George	4 SSB
VK3CJJK	Jim	4 SSB
VK3QJM	Brian	3 SSB
VK3ZYC	Jim	3 Digi
VK3VHF	Rhett	2 SSB
VK3AL	Alan	2 Digi
VK2DZV	Ross	1 SSB
VK7MO	Rex	1 SSB
VK3HIV	George	1 Digi
VK3TLW	Mark	1 SSB

3.4 GHz

3.4 GHz		
VK3ZUX	Denis	1 SSB
VK4T2L	Glenn	1

5.7 GHz Terrestrial

5.7 GHz Terrestrial		
VK3NX	Charlie	11
VK3QJM	David	9 SSB
VK3WRE	Ralph	7 SSB
VK3KAI	Peter	6 SSB
VK3HV	George	4 SSB
VK6KZ	Wally	4
VK3BJM	Barry	2 SSB
VK3EK	Rob	3 SSB

5.7 GHz EME

5.7 GHz EME		
VK3NX	Charlie	8

10 GHz Terrestrial

10 GHz Terrestrial		
VK3NX	Charlie	10

24 GHz

24 GHz		
VK6BHT	Neil	3 SSB
VK2EI	Neil	2 SSB
VK3NX	Charlie	2
VK6KZ	Wally	2

474 THz

474 THz		
VK3CJJK	Chris	3
VK3H2	David	2
VK7MO	Rex	2
VK7TW	Justin	2

Additions, updates and requests for the guidelines to Guy VK2KU, vk2ku@clearmail.com.au.

The guidelines (and the latest League Table) are also available on the website of the NSW VHF Dx Group at www.vhfdx.radiocorner.net - click on Gridsquares.

Next update of this table will close on 24 August 2007.

Stations who do not confirm their status for more than 12 months may be dropped from the table.

TVI High Pass Filter with Braid Breaker.



An inline TVI filter with Braid Breaker.

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QSL cards from the WIA National QSL collection

Hon. Curator: Ken Matchett VK3TL
wiaqslcollection@wia.org.au

Amateurs transmitting on the broadcast band

This is not the sort of headline one would like to see at any time, but in pre-war days the heading would not have raised an eyebrow. Warren VK3LX dropped in a few old QSLs that he thought may be of interest, and so they were. The pre-war QSL of VK3RI was amongst them. This was the QSL of the Victorian Railways Institute Wireless Club in the Railways Building, Flinders Street. (The term 'wireless' had not at that time been almost universally replaced by 'radio'.)

The card gave details of the times of transmission during the weekend when amateur stations were permitted access to the lower end of the Broadcast frequencies. These transmissions were very well received by the community, particularly in the absence at that time of full-time transmissions by commercial stations. Listeners made a common practice of sending in their requests for music to be played over the air. We can read from the QSL that there were certain schedules for Saturday and Sunday transmissions.

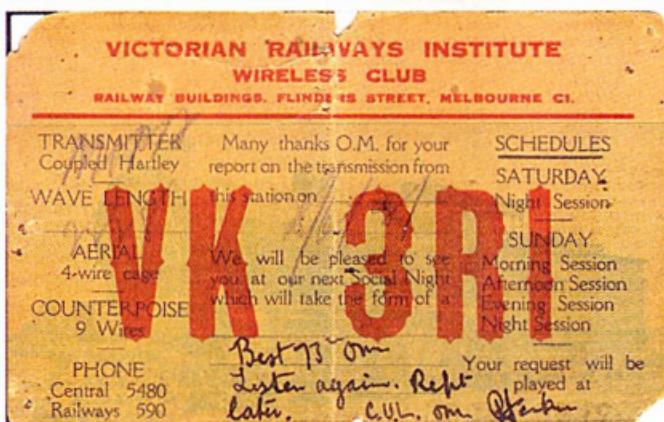
A note on the reverse side of the card shows that it was received on 2 July 1931. The general set up for VK3RI was a coupled Hartley transmitter, the antenna either a wire cage or, later, a

zepp. long wire. Wave length was usually about 230 metres.

Another well-known transmitting station was 2CM that transmitted in the late 1920s. (The VK prefix did not come in until 1 January 1929.) The call belonged to Chas. MacCuran of Stratfield, Sydney. He was well known throughout Sydney for his excellent transmissions on the broadcast band. He had set up his antenna (a zepp. long wire) on the top of the Wentworth Hotel in the heart of the city. He must have been lucky to do this, but the fact that his parents owned the hotel might have had something to do with it!

By coincidence, amongst the QSLs was one sent by Bill Sievers VK3CB who operated in the 1920s and was very active on the commercial bands between the two World Wars. He filled the air with what were called 'backyard concerts'. His 'studio' was his Richmond house – a backyard shed and a gramophone player in his lounge. His broadcasts were mostly of popular artists of the day like Tommy Dorsey and Duke Ellington. At the time aluminium was in very short supply, so he used galvanised iron. The aerial coils were wound on cardboard.

Bill was a great CW operator. He



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used to say that he preferred CW because he couldn't understand all those foreign languages! He used crystal control MOPA (master oscillator, power amplifier) and the antenna was usually an 80 ft. wire cage.

Mark Shaffer's QSL, 3XF, was there too. On his QSL he informs us of the fine DX he had successfully worked. This included 'all Australian States and New Zealand fone and CW'. Nowadays this brings a smile to our faces to read this, but in the 1920s it was quite an accomplishment.

Mike VK6HD, one of our top DXers, received a special award from the WIA as far back as 1991 for his contribution of QSL cards to the WIA Collection, and he continues to donate some excellent rare DX QSLs. Many of these will be of interest to our prefix chasers. To mention a few: Turkey TC3A (celebrating the city of Karacabey); Italy IU3AC (celebration of Antonio Canova); Bulgaria LZ26ZA (death of 26 saints); LZ13ARDF, a multiple prefix and suffix about the World Radio Direction Finding Championship 2006. (Does Australia compete?) Czech Republic OL4HQ; Belgium OT1A; Canada VA7ANTA (a special prefix and suffix about Antarctica). VC30 (discovery of oil), Ukraine EO60G (60 years since World War 2), Serbia YT9X, Poland SN5M (contest call), Japan 8N6 (Nagasaki Walking Tour), and 8NIC50A, a most unusual call sign celebrating 50 years of Chofu City. (Pity the poor CW operators engaged in a Field Day Contest!)

From the St George ARC, sent by **Peter VK2JTV**, came QSLs from the estate of Bill Shakespeare, exVK2AGF, in two fine display albums. Most QSLs were dated from the 1970s, including Corsica FC2, OX3, Y31, AH3, 6Y5, 9J2, 9M8, ZE2 (Rhodesia), CR6 etc. Also included was a QSL from Clive VK2DQE aeronautical mobile in a Qantas 747 at 37,000 feet between Sumatra and Singapore.

An interesting QSL from the somewhat rare **Lakshadweep Island**, south west of Sri Lanka, sent by Allan VK2CA. It was a special QSL sent to supporters of this VU7RG DX-pedition.

More acknowledgements next month.

Keep up those QSL contributions.

73 Ken

ar

Silent keys

Howard Douglas Sullivan VK4FLH

Howard Douglas Sullivan, aged 48 years, and a long term sufferer of muscular dystrophy, lost his battle with life on Thursday, 17 May, 2007.

Howard was well known in Mackay ham circles for his wicked wit and doubtful emails.

Whilst he was able Howard enjoyed a good CW session, and later a good ragchew.

Howard will be greatly missed by all who had regular contact with him.

Submitted by Gavin Reibelt VK4ZZ, Brian Coleman VK4LH and George Glendinning VK4AJL.

William J (Bill) Currie VK3AWC

It is with great sorrow that I advise the passing of Bill Currie VK3AWC, who passed away Monday, 28 May, 2007.

Bill was loved, respected and admired by all of us as a great club member, not only of the M. & D. R.C., but also of the CW Operators QRP Club, and the amateur fraternity in general.

It was wonderful what 'Scrooge' could get out of a few 'chips'.

Most know that Bill made our weather

satellite receiver – possibly one of his last projects.

He was always 'on tap' should anyone require help or advice.

He and wife Adrienne fought a great fight with Bill's illness – marvellous how she brought Bill to our morning meetings, then called back to take him home.

The Morning Group stood in respect and remembrance.

Submitted by Ken Morgan VK3CEK, on behalf of the M. & D.R.C.

Ray McGregor VK5YV

Ray obtained his licence in 1957 and was active on one metre and after 2 metres with his then callsign of VK5ZBM. Using AM and homebrewing all of his equipment, he had many an enjoyable contact using a 616 in the final and working many stations in Adelaide and further afield when conditions permitted.

About 1960 he built a 6 metre station using a pair of 807s as the modulator and running 100 watts output of AM from the final, working all states, territories and New Zealand. He was very active up until the early sixties, and then became relatively inactive due to family commitments. In the late sixties, when I was showing a great interest in amateur radio, he built up another 6 metre AM station using a type 3 MK 2 transmitter, a 6 metre converter feeding into an old short wave broadcast receiver. This was at a time where stations were crystal locked and everyone knew where to look for you on the band.

Shortly after this, he had a stint on

sideband using both IC-202 and IC-502 on 6 and 2. Many a time I would be Dad's second operator. In 1978, dad thought it was about time to upgrade to the then full call, so, not knowing Morse, he learned it himself and obtained VK5YV. He also designed and built a 40 ft 3 legged tower with a huge wind loading which still stands as a monument to him and has withstood quite a few storms.

In the mid seventies, Dad was one of the many tireless workers who donated his time to help out with the conversion of the Burley Griffin Incinerator to a meeting place for the then SA Division of the WIA. Dad had great pleasure building aerials and lately experimenting with ATUs and the 30 metre band. In concluding, I would like to thank Dad for getting me interested in the best hobby in the world and may you have plenty of QSOs in that ham shack in the sky.

73 Ray VK5YV. RIP.

Peter John McGregor VK5APX.

William (Bill) Mitton Rice VK3ABP

18th May 1927 – 29th May 2007

Bill Rice commenced as a radio amateur at Murray Bridge in 1947 with the call sign VK5BP. Bill operated on 40 metres with a transmitter consisting of a Franklin VFO using 6AC7 valves, a 6L6 driver, and push pull 807s in the final amplifier, modulated by a further push pull 807 pair.

In 1948, Bill moved his equipment to Adelaide, where he attended university. From the suburb of Prospect, Bill could be regularly heard on 40 metres when he possibly should have been studying for those many examinations!

Following graduation, Bill moved to Melbourne in 1953 and since 1956 he operated from his home in Altona with the call sign VK3ABP. Bill was wont to say that "ABP" stood for "always being pedantic" but less polite people claimed it really meant "always bloody pedantic".

In his earlier days, Bill was very enthusiastic about the engineering design and the subsequent building of his own communications receivers. He was also well known for his VK3ABP 2 m converter, published in Amateur Radio magazine in 1962, which is arguably the most popular piece of equipment ever published in the magazine. He followed with an article on the 6 m version of the VK3ABP converter several years later. Unlike today, the amateur operators of those earlier years built almost all their own equipment and Bill was no exception.

In his early years in Melbourne, Bill was also very busy repairing early TV receivers, but his day job was with the Aeronautical Research and Development Unit (ARDU), part of the RAAF, based in Laverton. ARDU tested and evaluated RAAF aircraft and weapons. Bill supported the flight trial work and applied his knowledge of radio when the trials used radio telemetry to acquire data.

When the ARDU moved to South



Australia in 1977, Bill transferred to the Aeronautical Research Laboratories (ARL) in Lorimer Street Fishermans Bend, which was then in the Department of Supply. ARL instrumented the RAAF aircraft and equipment, designed and installed the signal conditioning and recording equipment, and analysed the data. Bill worked in the Materials Division supporting the applied research for the RAAF and stayed there until his retirement.

Bill said very little to family and friends about his work with ARDU and ARL, and the leading edge technology involved.

Bill was a keen sailor and his expeditions to the rarely filled Lake Eyre in 1974, 1975 and 1976, when the lake uncharacteristically held water, are well known. He was the first radio amateur to operate "marine mobile" from Lake Eyre and circumnavigated the lake on his beloved trailer catamaran, the "Red Baron". One wonders if that feat will ever be achieved again.

Bill also sailed the "Red Baron" numerous times in the Marley Point races in the Gippsland Lakes. He seemed to take pride in always being the last to finish.

In 1972 Bill joined the *Amateur Radio* magazine Publications Committee as the technical editor, became editor in July 1984, and continued in that position until December 1999 to become the longest serving editor ever of *AR*. As *AR* editor, he also served on the WIA Federal Executive for many years.

In 2001 Bill was awarded honorary life membership of the WIA for his long and meritorious service, which he accepted with characteristic humility.

Bill was the perfect recycler and re-user. Much to his family's concern at times, he never threw anything out. For instance, he had tobacco tins full of the

leads that he cut off resistors, capacitors and other components. He even flicked the excess solder from his soldering iron into a tobacco tin and eventually melted it down to make a counter weight for his home brew wind generator.

Bill kept meticulous notes and recorded everything that he did in a form of lab book. When most hams were buying synthesised 2 m rigs, Bill designed one using a VFO and the crystals he had in his collection. The rig had lots of switching and mixing and he spent weeks working out all the mixing products, spurious, and possible birdies, etc, as well as the switching, to get the frequency coverage that he wanted. His aim was to build the transceiver using the crystals he had in his "junk box" without having to get any extra crystals.

I had the privilege of knowing Bill, both personally and as an active radio amateur, for over 45 years. He was a quietly spoken, deliberate but personable man, with a brilliant, always enquiring mind. He was truly one of nature's gentlemen with never an unkind word for anyone. He was one of the most knowledgeable and practical people I have ever met.

Bill's command of language was exceptional, if slightly pedantic at times. His contribution to *Amateur Radio* magazine as a contributor, technical editor and editor over 27 years will be long remembered.

The celebration of life service held for Bill at St Eanswythe's Anglican Church was packed to over-flowing and a major feature of the service was the loving and humorous eulogies delivered by Bill's five children, and by Ron Fisher VK3OM representing Bill's radio amateur friends.

My thanks to VK5BR, VK3ZKK and VK3OM for supplying information for this obituary.

Our sympathies go to Bill's wife Margaret, his five children Jenni, Kathy, Janet, Diana and Peter, and his grandchildren.

Bill Roper VK3BR

From Christine VK5CTY

July is the month when you make sure all your equipment is working well, ready for the two biggest Contests of the year. The Remembrance Day Contest is on the weekend of 12th and 13th of August and the ALARA Contest is on 26th and 27th August.

The Remembrance Day Contest runs for 24 hours from 1800 EST Saturday to 1759 EST on Sunday. This contest is run to commemorate the end of WW2 and is always held over the weekend closest to August 15th when peace was declared. Only stations within Australasia are counted in this contest. DX is ignored, except for New Zealand. You will hear

more VK stations on the air at the one time than at any other day of the year.

The ALARA Contest is run over 36 hours to give everyone two bites at the 80-metre band. For OMs only contacts with YLs count, while YLs can count all stations, and club stations 'manned' by YLs are encouraged. It has been found that although there are a few DX YLs keen enough to stay up to join in our contest, most contacts are made in the evenings on 80-metres, with a number of ZL stations eager to work.

Please do participate in both these contests. The Remembrance Day

weekend is intense because of the many stations participating, while the ALARA Contest is much more 'laid back' with time to have a chat. Both Contests are fun.

HF stations contacted in the Remembrance Day Contest on a particular band cannot be scored again, but in the ALARA Contest, because there are so few YLs in the amateur community, you may contact the same station again after a 1 hour interval on the same band. It is worthwhile staying around a bit longer for that extra contact for both yourself and the other station!

From Jenny VK5ANW

The Centre Victoria Radiofest was held at Kyneton Racecourse on Sunday 22 April. Pam VK3NK agreed to help and, on a fairly chilly morning, we set up the ALARA table with help from Peter VK3RV and Pam's OM Graeme VK3NE.

Although we were safe from any possible rain, being situated under the Grandstand, we were on the outside edge and were very grateful when the OMs put up a windbreak behind us.

Within minutes of our arrival, Michele VK3FEAT came over, introduced herself, and told us she was already an ALARA member. Michele was helping to run the

Amateur Radio Victoria table opposite and we managed several conversations during the day.

Judy VK3AGC spent quite a bit of time with us and it was good to catch up with her again. We also renewed an acquaintanceship with Jenny VK3MDR and her daughter Kate VK3FROG. We all felt a lot older when we realised that we had all met at Dubbo ALARAmeeet in 1990, and Castlemaine ALARAmeeet in 1993, and Kate appeared in the photos as a toddler!

We were pleased to meet new ALARA members Lia VK3FLIA and Selina VK3FLNA. Christina VK3FOXE and

Elly VK3FLEW also spent time with us and took application forms to read. We enjoyed chatting to the many OMs who came over, as well as the YLs. David VK3UR brought greetings from mum, Gwen VK3DYL.

Perhaps the most humorous event of the day was when one OM felt that our stand would be "the ideal place to find a wife"! Presumably he meant one who would be sympathetic to Amateur Radio!

Overall we felt that it had been worthwhile, and the day passed quickly. Many thanks to Pam for her support.

From Marilyn VK3DMS

As you can see elsewhere in this edition of AR, the ALARA Award has been updated and computerised, thanks to Kathy VK3XBA our Award Custodian. It is one of the most attractive Awards to have on your Brag board in your shack. To qualify you need contacts with 10 YL ALARA members from at least 4 different call areas. It is easy to make the required number and variety of contacts by taking part in the ALARA Contest, as this is a time when many of our members make sure they are on air. If you wish to apply for this updated Award, Kathy will be very happy to hear from you, and will pass on further details if needed. She can be contacted by email: kathyg@spacelink.com.au and logs for



They really keep it in the family - ALARA founder Norma VK2YL has 3 daughters, now all members - Lorraine VK2FICQ, Christine VK2FIZI, & Laura VK2FLKM - seen here studying for their calls.

the Award can be sent by email also. Full details of the Award rules will appear in a later edition of AR.

Travel seems to be in the air for some of our members – currently Pat VK3OZ, Christine VK5CTY and Val VK4VR are all enjoying a trip to England and Europe. We will look forward to hearing about their travels when they return.

There have been some changes on the ALARA Committee, with Bron VK3DYF and Gwen VK3DYL retiring from 'active service'. I am sure that all our members are grateful for the many years that these ladies have given to ALARA, and hopefully we will still catch up with them from time to time. A very big welcome has been given to Tina VK5TMC, Jenny VK5ANW, Pat VK3OZ, Pam VK4PTO, and Robyn VK3WX who have filled the gaps.

From Dot VK2DB

OM John and I had a wonderful weekend at the WIA AGM held in Parkes. We all met on Friday night at the CSIRO Radio Telescope Visitor's Centre, where we had dinner, and were invited to attend the meeting of the Central West Astronomical Society. With all the WIA visitors, it was the biggest meeting the club had ever had. We heard the speaker, Dr. Geraint Lewis, speak of "The Runaway Universe: the influence of Dark Energy".

Saturday morning was free, and then lunch was a BBQ in a lovely large park around the famous historical Bushman's Dam. The very well attended AGM was held Saturday afternoon and the actual AGM part was all over in 19 minutes (still 10 minutes longer than our ALARA AGM!) The open forum after the AGM took a few hours, leaving a short time to prepare for the formal dinner.

After dinner the speaker was Michael VK3UBM who had dabbled in rocket science since he was a little lad.

On Sunday we were taken on the guided technical tour of the Radio Telescope. As it is always 'being used',



Another family affair – L to R: Amanda VK5FAAJ, Jenny VK5FJAY, Melanie VK5FMEL

it is only open once a year to the public, but this was a special tour planned with the WIA, so we were very lucky.

We tried to gather all the YLs together for a photo shoot, but some were on the tour, some were watching films in the Visitor's Centre, and some were eating or drinking – never all in one place, although at the end the whole group gathered for one big altogether photo.

The whole weekend was one that none of us will ever forget, and was as well planned and prepared as one of our ALARAmets! Of course we now wonder what the WIA committee will decide on for next year's AGM.



ar Photo 2: YL group at Parkes. L to R – Name not recorded, Dot VK2DB, Jenny VK3MDR, Freda VK2SU, Jeanne VK5JQ, Joscelyn VK4JJ

WOMEN IN RADIO

Christine Taylor VK5CTY

SHIRLEY VK5JSH

Shirley is a relative newcomer to amateur radio and to ALARA as she will tell you, but since she joined ALARA she has pulled her weight. She is currently our second Vice President, and our Historian. She prepares the roster for the Monday night Nets, juggling everyone's commitments. She is involved in various devious schemes to make the ALARAMEETS more fun.

She is on the Monday night nets almost every week and has been since she became an amateur. She is a keen Echolink operator including taking over as net-controller of at least one net she just joined for interest.

Shirley has had her licence since 1998 after joining a radio course run by Geoff VK5TY. Her OM Jim was a VK3 licensee before he moved to VK5, although he didn't operate very often till

Shirley passed her exams.

Shirley is an accomplished bobbin lace maker, always ready to learn a new technique. She has recently taken an interest in patchwork and cross-stitch because other VK5 YLs are involved in these craft activities.

Shirley is a keen gardener and regularly preserves all the fruit she grows or is given, with several special 'secret' orchards at her fingertips.

She is a keen amateur astronomer and loves the part of South Australia where she lives. She was born in Glasgow but came here as a young girl with her parents and siblings. She has twin children, a boy and a girl, and two grandchildren with whom she is



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DOT VK2DB

Dot has been a member of ALARA for many years. She has been our very efficient editor of the ALARA Newsletter since 1996, taking us from the days of the Gestetner into the most up-to-date computer technology.

Dot is ready to undertake any task offered to her. She is keenly involved in the Hornsby Radio Club and participates in any new project proposed. She is insistently feminist; as the mother of four sons she has always needed to uphold her rights! When Dot makes an electronic device, it will be housed in a pink rabbit, or a flowery cover to add her personal touch. The device also works properly!

Dot is a keen gardener who is very conscious of the rights of the animals who share her garden area. There are a number of lizards, birds and wallabies that share her garden. She draws the line at snakes unless they stay strictly outside the house.

For a number of years Dot converted the VK2 broadcast from packet to text and posted it on the Hornsby Club website for those without packet. To do this she had to use two or three different computers each time, contending with all the problems we encounter with computers, from time to time (hi, hi).

The many hours spent every three months to produce the ALARA Newsletter must be uncountable – when she has the news to fill the pages. Her problem is that too many people think that what they do is of no interest to



others, so they don't 'get around' to sending stories (and pictures) to her. On her behalf, this is a plea for all YLs to keep Dot informed.

Dot is also very interested in steam trains and for many years participated with her sons in a number of expeditions and working bees involving the old monsters.

With the assistance of her son Peter, Dot has given ALARA a voice on the Web. She keeps it up-to-date and has even redesigned it once or twice as technology has changed.

Dot and her OM John VK2ZOI (and sometimes her two younger sons) have been to most of the ALARAMEETS and represented ALARA at a number of Hamfests on the East Coast.

We appreciate all the works Dot does for ALARA even if we don't always remember to tell her so.

ar

CQ

An age old process for meeting
a friend
A stream of rules and a certain
method
All criteria must be met
Just to say hello
Waves full of fresh voices
Fill the ancient machines
Regulations are stretched
To meet the next generation
The cobwebs are swept away
The equipment takes on new life
Technology advances

The rise and fall of pitch
Reaching beyond the stars
Empty space is filled

A sound seeps through the crackle
An answer in the darkness
A voice within the night

Metal splays the horizon
Black lines writhe on the ground
Keeping the silver monster
Strapped into the earth

A black box
A green screen
Numbers lead the way
Turn the knob
Push the button
Hope a friend is there

An original poem by Christina Simon VK3FOXE

OzGear
www.OzGear.com.au
RadioCommunications & Electronics
sales@ozgear.com.au

OzGear is now 'internet only'

This is not the news we wanted to bring to you... but... due to poor customer support resulting in low sales figures, we have been forced to move from being in a physical shopfront to become a part-time internet-shop-only-based operation.

To a large degree this "change" has occurred by virtue of more and more people purchasing internationally via the internet, coupled with the market forces generated by the "grey-market-ers" and eBay and the people who buy from them. With people continually purchasing from such 'non-authorised sources', the death knell has sounded for the Australian "physical" radio and electronics shopfronts, OzGear's included.

The outcome :

- We cannot be contacted by phone – the 07 31142506 number is an "email us" advice message only.
- We have left the Acacia Ridge shop address and become home-based.
- No more personal pickups. Everything is either couriered or mailed.
- Email is the only way to reach us – and it will be answered as time permits.
- "Advice request / Help Desk" facilities are no longer available.

Products :

- We have minimised product lines and stock levels.
- Primary product lines are Icom, Yaesu, Sangean and Tigertronics. We remain an authorised Australian dealer with manufacturer's Aussie warranties !
- Some other products are available – only as listed on the web site.
- Many products are now supplied on a back-order basis only.

For those who already deal with us by email/web/mail order, the only real change is the reduced product lines.

Visit OzGear.com.au for
continuing up-to-date details
on product lines and pricing

VK2

Tim Mills VK2ZTM

Via vk2wi@ozemail.com.au

Clubs

Last month the **Oxley Region ARC** held their annual Field Day over the Saturday and Sunday of the Queen's Birthday weekend. Attendance was slightly down but understandable with the wild weather conditions in Newcastle, the Central Coast and Sydney, where many visitors come from. There was good weather in Port Macquarie – it usually is for the long weekend – and those present did what amateurs do best – talk, other than at lunch time. Others checked out the bargains provided by the traders or from the surplus tables and trailers. A few still partake in field events and foxes are still hard to catch. Thanks to Oxley for another excellent weekend. Contact with the Club is via P. O. Box 712, Port Macquarie NSW 2444.

The **Orange and District ARC** meet at 7.30 pm on the first Friday of the month at the RAAF Cadets HQ in Warrendine Street, Orange. Further details can be obtained from Vice President, Robert VK2ZRJ on 0407 220 690 or rjalford@optusnet.com.au

Blue Mountains ARC also meet on the first Friday at the 1st Blaxland Scout Hall, Reading Street, Glenbrook at 8 pm. They may be holding their annual field day in a couple of month's time. More details expected next month.

Another first Friday meeting - the **Tamworth Radio Club Inc** have a new venue at the Tamworth / Oxley Scout Hall on the corner of Carthage and Hall Street, Tamworth. Their web site is <http://trci.org.au/> and their Publicity Officer is John VK2HUP.

The **Mid South Coast ARC** will be holding their next quarterly meeting on Saturday 4th August at the regular Little Forest Lodge venue, Little Forest Rd, Milton from 10.30 am. Contact the Secretary at secretary@mscar.org

Summerland ARC meet Thursday night at 7.30 pm and Sunday afternoons at 1.30 pm in their club rooms at Richmond Hill, which is a rural suburb, 10 km east of Lismore. They have their SARCFEST coming up on 12th August. Check out their email vk2src@sarc.org.au

The **Orana Region ARC**, located at Dubbo, meet on the last Saturday afternoon of the odd month. This month, on the 28th.

Fishers Ghost ARC meet on the last Wednesday of the month at 7 pm at the Campbelltown Performing Arts High School.

The **Hunter Radio Group**, in Newcastle, formerly the Hunter Branch of the NSW Division, was formed in 1925. They meet monthly on the second Friday evening at the NBN Television Studio. On Monday evening at 7.30 pm, they conduct a news session via VK2AWX on several frequencies and include extracts from VK2WI News with both National and ARNSW content. They conducted an exam last month and have others at regular intervals. The contact is Grahame VK2FA on 02 4954 8688. This month the Group operated in the Trans Tasman 160 m phone contest from the Luskintyre Tiger Moth Airport and next month will do the same in the RD Contest.

The **Central Coast ARC** held a Foundation exam last month. For future exams contact Leonie VK2LCP on 4329 1674 or email to foundation@ccarc.org.au. The Club meets on the first and third Friday at their club rooms, Dandaloo St, Kariong, near Gosford. Check out their web site on <http://www.ccac.org.au/>

St. George ARC. Last month these notes reported on their problem with a site rent increase for the Mt. Bindo VK2RDX 6650 repeater in the Western Blue Mountains. To date there has been good support to maintain this service and an operating fund has been established. Many donations have already been received which should cover this year's costs. If you would like to assist - check with Peter VK2EMU at vk2emu@wia.org.au. This repeater provides a link across the mountains from the Sydney coastal strip to the west into locations like Bathurst, Orange and beyond. It is one of the automatic relay systems of VK2WI News.

ARNSW

May 27th last was both a regular T&T day and the low key celebration of 50

years since the formal opening of the VK2WI building at Dural. On 19th May 1957, the opening was performed by [the late] Sir Allan Fairhall VK2KB. At that stage the building had been completed and was waiting to be fitted out with the equipment. Over two hundred came to Dural last May. The fine mild day's activities started mid morning. A marquee tent had been erected to house traders and displays. A sausage sizzle lunch was provided and the T&T department did brisk business. The afternoon was devoted to demonstrations by the Home Brew Group and rag chewing. Many who attended had not been to the site for decades and for some others, it was a first time. The incoming ARNSW Council was pleased with the success of the day and is in the planning stages for another such day, a few months down the track. Unfortunately, it is unlikely that any form of shed will be on site to house such events in the near future. The local council is still being difficult and after many questions and requests for further clarifications as to the need for it, they rejected the application. There is some rethinking going on at the moment. The next regular T&T will be at the end of this month – Sunday 29th.

The new ARNSW Council is getting stuck into its program for this year. The major office bearers as mentioned last month are *President* Norm Partridge VK2TOP; *Vice President* Barry White VK2AAB; *Treasurer* Beth Langley VK2AO and *Secretary* Brian Keegan VK2TOX. Other portfolios decided at the first meeting in May were Brian Keegan VK2TOX who is also the Public Officer and Web Master. Terry Ryeland VK2UX is Junior Vice President and Education. Michael Corbin VK2YC has publicity, Deceased Estates and stage 2 projects. Barry White VK2AAB has the shed project and is the investment manager. Erik Houseman VK2MAN has the broadcast compiling and also the web site. Brian Kelly VK2WBK is the Dural officer and NTAC co-ordinator. Norm Partridge VK2TOP looks after membership and clubs. Noel May VK2YXM has T&T involvement and

Beth Langley VK2AO also has stage 2 involvement.

The redirection on the office phone – 02 9689 2417 – mentioned recently, has been extended for a few more months. One of the former VK2 Division Education Service publications – 100 Projects – has been transferred to CD by the NZART with permission of ARNSW. The exams through ARNSW are currently confined to the Foundation and conducted on the last weekend of the even months. The next will be at the end of August. A reminder that all matters relating to repeater and beacons, should be referred in the first instance to our State NTAC, who is Brian VK2WBK. Under licensing requirements, you cannot operate a repeater or beacon which is not approved by ACMA. VK2WI News, with its wide coverage, is a service available to all VK2 clubs and groups. We do ask however that all news items for VK2WI be submitted in electronic form – vk2wi@ozemail.com.au – to save retyping and to stop it getting lost – must include – VK2WI NEWS – in the subject heading.

VK2WI

The first broadcast from VK2WI was made in 1955 using two mobile equipped vehicles. Michael Corbin VK2YC provided the information that the announcer was Stan Bourke VK2EL, using the 40 metre transmitter of Don Pollard VK2ASW, 5 watts from a 6AQ5 into a ½ wave dipole and on 2 metres, with a transmitter in VK2IC's Austin A40 and a 3 element beam on its roof. Stan had to hold both microphones and read while standing. Michael relates that as a lad in short pants, he was given the task of going down the back of the Dural property with a 40 metre receiver to monitor the transmission and to only return if the transmission stopped. In last month's notes there was a report on the proposed 60 metre transmission to be introduced. If all goes to plan, the transmission will start this month with the morning VK2WI News being relayed on 5.4235 MHz. This is a service for the manual relay stations to source from and anyone else who can listen.

VK2WI News has the benefit on Sunday morning of being relayed through many regional repeaters. This is provided on the Far North Coast by Summerland ARC through VK2RIC 6800 and Byron Bay VK2RBB 6625. In the New England region, there is Tamworth VK2RTM on 6750 and often through the Central West systems – VK2RCC 6800 and VK2RCD 6725.

The Hunter Radio Group provides an Echo Link node for VK2WI News for both the morning and evening sessions. It can be sourced at either VK2RNC-R or # 126 558. This path has transmissions provided on 2 metre simplex in Orange by VK2BLO and in Cobar by VK2JWG. In Adelaide, VK5BUI provides a retransmission of the ARNSW content. If you would like to use this link to retransmit through a local repeater or out on simplex, would you contact Grahame VK2FA, who is in Newcastle. VK2RNC 6975 is one of the automatic relay points. This repeater is linked to the Great Lakes ARC VK2RGL 9775 which is now in the automatic relay circuit.

The Central Coast ARC provides an automatic relay through VK2RAG on 6725 and they take morning callbacks.

To the west of Sydney, the St. George Mt. Bendo VK2RDX 6650 is an automatic relay repeater.

Down south, the Illawarra ARS provides South Coast morning coverage through their Coastlink service down to about Narooma, through VK2RMP 6850 Maddens Plains, VK2RIS 6975 Saddleback and VK2RBT 6675 Mt. Boyce. They conduct callbacks. They have the capacity to link inland towards Wagga but there is some division with Amateurs along this path between those wanting a relay and those who don't.

The automatic relays occur both morning and evening. Most manual are morning only.

Would anyone who does a relay, not mentioned above, please let – VK2WI News - know by an email to vk2wi@ozemail.com.au so the records are up to date. As indicated above, callbacks are taken by most manual and by some automatic relay stations. These are in addition to those taken at

VK2WI. Please forward, by any means, the number of callbacks to VK2WI. We need these for both our own and national records. Anyone who is unable to call in by radio can use the email connection.

Looks like I have really used up this months space allocation!

73 Tim VK2ZTM.

AEI

Australian Industrial Enterprise's uniquely designed one man tower is Australian made and exported world wide.

Comes in sizes 7.5 metres to 15 metres, all built to spec, not just stretched.

Safely raise and lower your array, by yourself, with both feet on the ground.

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We can do a trailer mounted version to order.

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Talk to me, Kev VK4KKD, about your particular needs.

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We now manufacture a range of Delta loop, Quad and Yagi antennae.

Home of the one man tower
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VK3

Amateur Radio Victoria News

Revival gains momentum

The number of radio amateurs continues to grow following the restructuring of the licence system which became fully effective in early 2006. The Foundation Licence has been the major attraction resulting in a healthy level of upgrading to the Standard and Advanced licences.

Currently there are well over 400 with the entry level licence in Victoria, more than double that registered 12 months ago. On the VK3 experience, one in six Foundation Licensees has upgraded in the past 18 months.

The availability of training sessions and assessments is the key to why some parts of the state are experiencing growth in people joining amateur radio while other areas are not.

A few who were very keen to get into amateur radio have not been bothered by the need to travel some distance to attend training and licence assessments. One fellow took a cheap flight from interstate to attend the Box Hill North sessions after not being able to find another suitable weekend session.

Another good sign is that there appears to be a little interest emerging in Morse code from the new licensees. A similar trend occurred in Britain after it introduced its Foundation Licence in January 2002, perhaps aided by that country's unique look-up Morse test for the entry level licence.

Well deserved recognition given

In this column brief mention was made last month that a review of amateur radio activity in Victoria had identified a number of achievements, that while being 'mentioned in dispatches' were worthy of more formal recognition.

The Amateur Radio Victoria Council decided to revive the S.W. Gadsden Trophy, created in the memory of our President 1930-31, and in doing so recognise a number of achievements on the trophy that dates back to the 1950s.

The list of recipients of the SW Gadsden Trophy announced on 23 May,

2007 at the WIA Victoria-Amateur Radio Victoria Annual General Meeting were:

Ray Naughton VK3ATN 1964

For the outstanding achievement of world's first Earth-Moon-Earth QSO on the 2 m band with Mike Stahl K6MYC.

Ken McLachlan VK3AH 1974

Coming to the assistance of Darwin after Cyclone Tracy had wreaked devastation, by establishing initial contact with Slim Jones VK8JT and for the next 36 hours having his home became a disaster communications centre.

WICEN (Vic) 1983

Responding to the Ash Wednesday bushfire disaster and then actively engaging in the disaster recovery phase by providing vital inter-agency communications. WICEN gained respect and recognition for itself and amateur radio generally.

Bob Arnold VK3ZBB 1988

For achieving the first QSO made by the crew on the MIR space station with the western world, by chatting to Cosmonaut Mousa Manarov U2MIR on 15/11/1988, as part of the Soviet Union's 'glasnost' or openness policy.

John Kelleher VK3DP 2001

In recognition of sterling service given as the WIA Federal Awards Manager for a decade, that included the efficient management of operating awards for radio amateurs throughout Australia and overseas.

WICEN (Vic) & RECOM 2003

The Bogong fire that burnt uncontrolled for four weeks put members of both dedicated groups to the test which they passed superbly to once again demonstrate the great contribution that radio amateurs can provide in times of emergency.

ARDF Victoria 2003

Acknowledging its leading role in the planning, management and conduct of the

Jim Linton VK3PC

Website: www.amateurradio.com.au

Email: arv@amateurradio.com.au

IARU Region 3 ARDF championships, held from 28/11/2003 to 3/12/2003 inclusive at Ballarat.

Brenda Edmonds VK3KT 2004

Brenda Edmonds VK3KT conceived the idea of having an amateur radio stand at the Great Australian Science Show resulting in WIA Victoria and its affiliated clubs mounting effective displays 2001, 2002 & 2003 at this well attended event.

Peter Forbes VK3QI & David

McAulay VK3EW 2006

For the exemplary effort as the QSL management team for Australia's acclaimed most successful special event station activity (AX3MCG & AX3GAMES) and their joint operation of AX3MCG.

Repeater report

The Mt St Leonard 70 cm repeater VK3RMU is now on its new frequency of 439.800 MHz.

Amateur Radio Victoria made the change mainly due to persistent interference from a suspected low interference potential device (LIPD).

The VK3RWL Warmambrol repeaters on 2 m 147.050 MHz and 70 cm 439.650 MHz are now on air but still require a little more work that may have to wait until better weather in spring.

Many thanks to Russell Lemke VK3ZQB, who, with others, worked to restore these Amateur Radio Victoria repeaters that were required to meet rigid and costly commercial site requirements. The coverage area includes Ballarat, Horsham, Hamilton and Portland.

Foundation Licence Classes

The next two weekend training class and licence assessments are 21 and 22 July and August 25 and 26. Do you know someone who could be interested in joining one of Australia's fastest growing hobbies?

To obtain more information or enrol contact Barry Robinson VK3JBR 0428 516 001 or arv@amateurradio.com.au

Eastern Zone Amateur Radio Club (Inc.)

The Eastern Zone ARC is about to change its home location. Since the late 1990's, we have been able to occupy the former Conference Room in the old SEC headquarters building in Morwell. The building has recently been sold. Given a number of factors, including uncertainty regarding continued tenure, we have negotiated to move the meeting venue to the Hazelwood South Hall, located in Tramway Road, Churchill. This move will also require a change of meeting night to a Thursday, as the Hall is the home of the Churchill Guides, who meet on the Tuesday night. This

move brings with it some work and some uncertainties, but also the scope to develop a worthwhile relationship with the Guide group. Details and a map of the new location should be on the Club website by time that this notice appears in AR.

We recently had three candidates attempting upgrade assessments. Congratulations to Damien VK3HGY, who should by now be on-air as VK3BUG. The other candidates are keen to continue their studies so that they can re-sit the tests.

Chris Morley VK3CJJK

The weekend of July 7 and 8 will see the running of the tenth annual GippsTech Conference at Monash University Gippsland Campus. It is a must for all interested in all aspects of communications at VHF, UHF and microwave frequencies.

The club now has a new web presence. We have established our own web domain name. For details of club activities, point your browser at <http://www.vk3bez.org/>



WAQ – Worked All Queensland Award

Here is the chance to add another award to your collection.

The Queensland Advisory Committee is pleased to announce the reintroduction of the Worked All Queensland Award. There have been several changes to bring the award rules into line with current Amateur Radio operations. The requirements are basically the same. The objective is to work a minimum of 50 different City and or Shire areas as set out in the awards list of Cities and Shires. The award has three levels of achievement: 50, 75 and 100 cities and/or shires.

One important point to note in the award rules is that only contacts made after the 31-12-2005 will be accepted.

The WAQ award will be administered and issued by the Queensland Advisory Committee. There have been a lot of enquires regarding the award, so we hope to see a lot of interest with its reintroduction. So, good luck to all who wish to participate.

I am sure you will find the certificate a great addition to your awards collection.

Worked All Cities and Shires.

Any amateur station may apply for this award. All you have to do is comply with requirements listed below.

1. The award is tiered to 3 levels of achievement. The first level may be applied for after the applicant has worked 50 of the listed cities and shires. The next level is attainable after 75 and the highest level of the award after 100 contacts to different areas have been confirmed. Only one contact in an individual area is required. One certificate will be issued for the first level, after that the award will be updated and confirmed by the Award Manager appointed by the QAC at the time of application.
2. If an Amateur is operating as a fixed (home or club) station, a portable or mobile station in a Queensland Shire or City council area, the operator is entitled to claim the shires and cities and towns they have made contacts from as worked areas.
3. Modes of operation are restricted to Phone, CW and Mixed. All bands may be used but are limited to simplex contacts. Cross band contacts are not accepted.
4. All applications must be accompanied by the operator's log, detailing the other stations worked callsigns, and the date, time, band and mode of the contacts. Both written and electronic logs will be accepted. The logs can be sent to the Award Manager. The issuing of the certificate is done on the honesty of the station applying.
5. All applications must be accompanied by payment for the postage of the certificate to you. For VK amateurs the postage of the certificate will cost \$5.00. For stations applying from outside the VK call area, IRC's for return postage to your address for a C4 size envelope (the certificate is A4 size).
6. Since the rules have changed, only contacts made after the 31-12-2005 will be counted.

A good place to look for contacts would be the 80 m nets, which take place most evenings from many different areas of Queensland. The club call back after the rebroadcast of WIA NEWS on Monday nights on 3.605 MHz and The Jack Files Memorial Contest would also be a good hunting ground for different

News from...

cities, towns and shires. There should be no problem reaching the initial level required to have a certificate issued. So why not give it a go and take the opportunity to add this certificate to your collection.

Award manager- John Spooner VK4AJS

WAQ Cities and Shires

The list of Cities and Shires can be found on page 44 of June AR.

Tablelands Radio and Electronics Club

TREC is working towards reinstating the Hann Tableland repeater which has been off air for some time. The repeater is sited NW of Mareeba.

The VK4RBK 70 cm repeater is back on-line with a new antenna and new frequency. 439.900 MHz negative split. It is working very well and the IRLP node 6114 is again linked via this repeater.

Tablelands Radio Group

TRG is planning a weekend at Cooktown again this year to activate the Grassy

Hill Lighthouse site for the International Lighthouse/Lightship weekend event. Callsign VK4GHL.

Around 12 Far Northern amateurs and their XYL's will be in attendance for the weekend. The planned social activities should prove to be very entertaining to say the least.

The Group would like to acknowledge Kenwood Electronics Australia Pty Ltd for their valuable support by way of promotional material for the Lighthouse Weekend.

Look out for a pictorial spread in a future edition of AR, in particular the Cooktown Formal attire. They may even have time to make some radio contacts.

Assessments in FNQ Region.

Foundation Licence activity continues in the region with examiners from the Tablelands Radio and Electronics Club (TREC) and the Tablelands Radio Group (TRG) being kept busy.

Central Highlands Amateur Radio Club

It's the time of the year when we need to bookmark the weekend planned for

the get together and the AGM at Camp Fairbairn near Emerald on the weekend of Friday 28th September, Saturday 29th and recovery on Sunday 30th, so remember to go mark the calendar now. You may also want to mark the weekend before, that is the 22nd and 23rd September for the Townsville Amateur Radio Convention. A wonderful get-together as well. Both these events fall in the school September holidays, so plan ahead now.

Gordon VK4KAL and Dot will look forward to hearing from you via email or on the phone to make a booking for the AGM weekend. Contact them either on telephone 07 49854168 or email donvk4kal@bigpond.com

Also check out the CHARC Yahoo Site at <http://au.groups.yahoo.com/group/charc/> and don't forget to call in on the CHARC Net Friday evenings from 1000 Z on 3618 kHz or on the Central Highlands IRLP Node 6037.

J.R. (Rossco) Anderson VK4AQ

VK5

Riverland Radio Club goes to market

Once a year, the Monash Primary school holds a "Mammoth Monash Market" to raise funds for the school. For several years the Riverland Radio Club has

supported this event by having a stall at the market. This gives members of the club a chance to dispose of some of their unwanted items ranging from CB radios

UHF CB radios, valves, printers, fax machines, computers

you name it, including household items. Ten percent of the sales are given to the club to help finances.

For the last couple of years the club has promoted the Foundation Licence Manual in the hope of attracting some interest into amateur radio.



Photo 1: Left to Right: Andrew Willis VK5LA, Malcolm Gardner VK5MJ & Adrian Reimann VK5AJR, who were manning the stall along with Doug Tamblyn VK5GA



Photo 2: The stall displaying the club banner.

VK7

Justin Giles-Clark VK7TW

Email: vk7tw@wia.org.au Regional Web Site: reast.asn.au

VK7 Licence Analysis

It was interesting to read the WIA President Michael Owen's column in the June AR magazine talking about the increasing numbers of amateurs in Australia. VK7 is a great example of this resurgence. A quick search of the ACMA Radcom database reveals a total of 575 licensed radio amateurs in VK7 split into: 408 Advanced Licensees (71%), 92 Standard Licensees (16%), 75 Foundation Licensees (13%) and 21 repeater and beacons licensed. Between 1 April 2006 and 10 June 2007, we more than doubled the number of Foundation Licensees and this is a real credit to all VK7 trainers, assessors, invigilators and all the people involved in the Foundation licence and upgrade training. This includes a big thank you to our VK7 Radio and Electronics School facilitators who are Tony VK7AX, Reg VK7KK and Peter VK2IY/7.

ACMA Mt Nelson BPL Report Released

In early June the ACMA released their long-awaited report from their January 2007 testing at Mt Nelson and I encourage everyone to take a read. The report presents the findings using three antennas connected to their test receiver (10 kHz BW) at VK7HCK's QTH. Testing was also undertaken outside the notched area and in the underground powered area of Tolmans Hill. The ACMA also included the US FCC Part 15 levels in most charts for reference purposes. An examination of the notches was also performed and at lower bandwidth (300 Hz) it was found that the suppressed carriers from the BPL system were still evident at relatively high levels within the notched area and this has been reported by amateurs within the trial area. The report suggests that the powerline segments either side of the affected amateur should be notched at all applicable amateur bands as this may help reduce the BPL interference that would be detected by amateur receivers. The VK7 BPL Virtual tours available on the

REAST website have proved popular. At the time of writing, the Mt Nelson tour has been viewed 5300 times and the North Hobart tour has been viewed 1800 times with many good comments. There is a high resolution DVD available and if you would like a copy then please contact me.

North West Tasmanian Amateur Radio Interest Group

NWTARIG is now running a different broadcast each night of the week commencing at 7.30 pm on the VK7RNW & VK7RMD and 70 cm ATV. On Monday it's the WIA

National News and VK7 Regional News replays, Tuesday – Long Delayed Echos or Scptical Sunday, Wednesday – TWIAR, Thursday – Solder Smoke and on Friday – Tech Talk Radio. Check the website for details: <http://www.vk7ax.ausport.net/>

Northern Tasmania Amateur Radio Club

May 9 was a great night with Trevor VK7TB who gave an entertaining talk on his 160 m antenna system, how it works, troubles matching it and the experimentation, even down to making his own antenna tuner. All in all a great night, thanks Trevor. June 6 was a great mixed dinner social evening at the Bombay Café, Launceston. A good rollup with much rag-chewing over great food.

Radio and Electronics Association of Southern Tasmania

Congratulations to Damien VK7FDNA who is now VK7LDA and also



VK7 Optical Transceivers abound!



LtoR: Mike VK7MJ, Steve VK7XOR, Martin VK7GN and Mark VK7FMDF with the calibrated optical transmitter and receiver.

congratulations to Thomas Karpinec, Joe Blume, Antony Cornwall and Roger Hall who all passed their Foundation Licence assessments recently and are eagerly awaiting their Foundation licences. June 6 saw the optical extravaganza night with Mike VK7MJ, our optical guru. The clubrooms were so full of optical transceivers and test equipment there was hardly room for the people attending!

Mike took us through some history, theory then out into the cold night for some calibration. We tested four versions of optical transceivers, four separate transmitters and a separate mirrored dish receiver (thanks to John VK3HW). We now have accurate powers and sensitivities for each of these boxes. The results are available on the REAST website. Thanks to Mike VK7MJ and Rex VK7MO for a great hands-on night.

VK6

Northern Corridor Radio Group

Phil Jamieson

HAMFEST 2007

The NCRG have been organising and running this event for 21 years in WA and this year will feature a number of firsts:

- *The Tesla Society* will be staging impressive demonstrations of coil power and static displays honouring Tesla's memory.
- *The 109 Signals squadron* will attend with some of their *Communications vehicles* on display for interested persons inspections. They will also have a display in the hall. A number of their members wish to sit for the Foundation licence via courses organised by the NCRG and Neil Husk WIA Foundation licence coordinator in VK6. They deploy to the Solomon Islands later this year.
- *VK4KVK* will be presenting lectures on *restricted space antennas and promoting his other books*. His first visit to Western Australia. Welcome Phil.
- The recently honoured *Mal Johnston VK6LC, WIA awards manager*, has been invited to present an outline of the program. Mal was awarded the first Chris Jones Award at the recent Parkes Convention. A full story of that presentation can be found on Page 4 and the inside back cover of AR magazine June issue.
- Finally all of the *regular stalls* and an *impressive line up of dealers* promises to make this event a memorable occasion.

See you all at Cyril Jackson Recreation Centre in Fisher Street Ashfield at 9.00 am Sunday 5 August.

ar

Spotlight on SWLing

Robin Harwood VK7RH

Dawdling sunspots and other dilemmas

Winter arrived right on cue, on the first day of June and after the mildest and wettest May on record for Launceston. Since then we have been shivering and extra blankets were hurriedly placed on beds. On the radio, propagation has been somewhat poor. The sunspots are positively dawdling with a complete absence of signals at times. Daytime is better and the higher frequencies are revealing some interesting catches. This is due to the drastic reduction in broadcasting and stations that were normally hidden are being heard. However I am hamstrung because my location still does not permit me to erect any outside antennas, which would make it more pleasurable to listen.

This has become harder as well because of the recent demise of the DXtuners website and the 30 to 40 remote operated receivers. There are only two Internet operated receivers, both in the States but they only offer compressed audio feeds and are not in real time. There appears that there is no obvious successor to DXtuners at this juncture.

Yet another external service is scheduled to cease broadcasting as from June 30th. Radio Budapest quietly announced they were not going to continue programming in foreign languages, although some Hungarian programs may continue. Hungary has been on shortwave since 1934.

Contrast this with China. They seem to be everywhere either with relays of their domestic networks or China Radio International (CRI). This reminds me of the days when Radio Moscow was everywhere. Of course, Beijing happens to be hosting the Olympics next year and they have certainly increased in size and output on HF to capitalise on this. Also the shortwave broadcasting explosion from China has another motive being to make it increasingly difficult for International broadcasts to be heard within China. The Chinese government, I believe, is eagerly seeking out sites within Africa to erect HF senders.

Zimbabwe has recently benefited

from Chinese technology to upgrade their ageing senders and infrastructure to combat anti-Mugabe clandestine broadcasts. They may have already commenced an external broadcasting service by now. Recent test signals have been observed on the 49 and 90 metre broadcasting allocations. The Chinese have also installed a major relay base in Cernik, Albania as well as buying airtime over senders in French Guyana and Sackville in Canada.

I also have been informed that Kol Israel in Jerusalem has got into financial difficulties and severe budget cuts may see the temporary closure of English, French and Russian programs relayed from the domestic network via HF.

We have seen comments for many years over the future of this programming, that I will only believe when I no longer can hear it. Anyway the Israeli Defence Forces Network continues to be easily heard here on 6973, best on USB at 2100. Programming naturally is in Hebrew.

Well that is all for July. Please send any comments or news to me at vk7rh@wia.org.au

73 de VK7RH

ar

GippsTech 2007

will be held on

**July 7 and 8
at Churchill.**

Further details and registration available via our new club website:

<http://www.vk3bez.org/>

David A. Pilley VK2AYD

New Zealand

New Licence Regulations

Effective 1st July 2007, New Zealand has revised its regulations governing amateur radio. For those of you travelling across the Tasman who would like to operate from the land of the long white cloud, the following are extracts from the new regulations:

4. Terms, conditions and restrictions applying to visiting amateur operators-

(1) Persons visiting New Zealand who hold a current amateur certificate of competency, authorisation or licence issued by another administration, may operate an amateur station in New Zealand for a period not exceeding 90 days, provided the certificate, authorisation or licence meets the requirements of Recommendation ITU-R M.1544 or CEPT T/R 61-01 or CEPT T/R 61-02 and is produced at the request of the chief executive.

(2) The call sign must be the national call-sign allocated by the other administration to that person, in conjunction with the prefix or suffix "ZL" which is to be separated from the national callsign by the character "/" (telegraphy), or the word "stroke" (telephony).

6. General terms, conditions and restrictions-

(2) New Zealand and visiting amateur operator call-signs must be transmitted at least once every 15 minutes during communications.

(3) National and international communication is permitted only between amateur stations, and is limited to matters of a personal nature, or for the purpose of self-training, intercommunication and radio technology investigation, solely with a personal aim and without pecuniary interest. The passing of brief messages of a personal nature on behalf of other persons is also permitted, provided no fees or other consideration is requested or accepted.

(4) Communications must not be encoded for the purpose of

obscuring their meaning, except for control signals by the operators of remotely controlled amateur installations.

(5) Except as provided to the contrary in this notice, transmitter power output must not exceed 500 watts peak envelope power (pX), as defined in ITU Radio Regulation 1.157.

(NZART)

Europe

500 kHz experiments expand in Europe

In other news, word that the German medium wave radio experiment is expanding. Since the beginning of 2005 the German telecommunication authorities have licensed a propagation study on medium wave bands. The first permit for an experimental station on 440 kHz plus/minus 100 Hz was issued to DJ2LF under the callsign DI2AG. In May 2006, DK8KW got the second licence to operate under the call-sign DI2BO at his home location in Peine near Hannover.

Now comes word that early in 2007 the experimental radio licences were extended to a second frequency. Besides 440 kHz, the frequency of 505.1 kHz plus or minus 100 Hz is also now being used. This frequency falls into the frequency range being used by the United States experimental radio group with the call-sign WD2XSH.

Swedish authorities have issued one licence for this frequency range.

(GB2RS News)

Japan

Li-ION batteries for your car

Japan's Mitsubishi Heavy Industries hopes to start mass production of lithium ion batteries for automotive use in 2010. These rechargeable batteries would be sold to auto makers for use in electric and gas-electric hybrid vehicles.

Sanyo Electric, which supplies nickel metal hydride batteries to Honda and Ford, is also developing the technology. Also getting into the act are electronics conglomerate Hitachi, car battery manufacturer Yuasa Corp and electronic

parts maker Murata Manufacturing.

Lithium ion batteries are more compact than nickel metal hydride batteries, contributing to fuel efficiency. But safety concerns such as overheating remain and the technology is still considered too expensive by many.

(arnewsline)

Canada

Ending 136 kHz and 5 kHz operations

In accordance with an agreement between Radio Amateurs of Canada (RAC) and Industry Canada – that country's telecommunications regulatory agency – special authorizations allowing some Canadian radio amateurs to conduct experiments at 136 kHz and 5 MHz will terminate June 30. "These experiments have had, as one objective, the provision of data that would support the objectives of RAC and the IARU for possible new allocations to the Amateur Service at these frequencies," the RAC said.

Future special authorizations will depend on the outcomes of World Radiocommunication Conference 2007 (WRC-07), which gets underway October 22, the RAC added. New, worldwide, secondary amateur allocations at 135.7 to 137.8 kHz and in the 5 MHz range are up for possible consideration at WRC-07. RAC Newfoundland-Labrador Section Manager Joe Craig, VO1NA, described some of his LF experiences in "The Transatlantic on 2200 Meters," which appeared in July 2005 QST.

(ARRL N/L)

Space

Piracy

ARISS warns of pirate activity:

Amateur Radio on the International Space Station (ARISS) reports a rumour that the ISS was making direct contacts on the 40 metre band. ARISS stresses this is not happening, as there is no HF radio equipment on board the space station, although the HF antenna is mounted. Sometimes the Goddard Amateur Radio Club, WA3NAN, retransmits shuttle audio.

(ARRL N/L)

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AMSAT

Bill Magnussen VK3JT

Summary of Operational Amateur Radio Satellites

There have been quite a few launches since the last summary. Most of these have been in the "Cubesat" class. These are very small packages, just a few centimetres in size and as such have rather limited power gathering capacity. They are usually injected into orbits that ensure early re-entry. Their lifetime can be expected to be measured in months rather than years. They are designed and built by University or College students and usually focus on some specific area of science. Their presence in the amateur bands is often sponsored by a radio club or an individual college staff member

who is a ham in the hope that the worldwide amateur radio satellite community will provide feedback to the students in the form of telemetry collection or advice. In turn they provide the amateur community with practice in tracking and telemetry gathering techniques that will be valuable, particularly to newcomers and to those wishing to evaluate their ground station performance. Perhaps some of the Cubesats listed here as active, at the time of writing, will have decayed or failed in the meantime. NO-60 RAFT-1 is a case in point. It re-entered and burned up just as this

column was being prepared. It had been in orbit only since December 2006. To save space I will list only those satellites that are known to be operational. A full list is always available on the AMSAT-NA web site, but even at this site small delays in updating can be expected. You will notice that a number of the Cubesats have their status listed as 'in-orbit'. My guess is that means the control stations have confirmed they are operational and presumably transmitting telemetry on demand. No individual web sites are listed for these satellites but the AMSAT site has more information.

AO-7 AMSAT OSCAR 7

Catalog number: 07530

Launch Date: November 15, 1974

Status: Operational depending on amount of sunlight

Current Mode: Listen before transmitting

Uplink: 145.850 to 145.950 MHz CW/
USB Mode A

432.125 to 432.175 MHz CW/LSB
Mode B

Downlink: 29.400 to 29.500 MHz
CW/USB Mode A (1 W PEP)

145.975 to 145.925 MHz CW/USB
Mode B (8 W PEP)

145.975 to 145.925 MHz CW/USB
Mode C (2 W PEP)

Beacon: 29.502 MHz CW

[http://www.amsat.org/amsat-new/
satellites/sat_summary/ao7.php](http://www.amsat.org/amsat-new/satellites/sat_summary/ao7.php)

UO-11 OSCAR-11 (for telemetry buffs only)

Catalog number: 14781

Launched: March 1, 1984

Status: Semi-operational

Current Mode: Telemetry Downlink - 2M

Telemetry Downlink: 145.826 MHz
FM 1200 AFSK

Due to solar eclipses which will continue until late August 2007, the beacon will only transmit for about one orbit every 21 days. It

is unlikely to be heard during this period.

[http://www.users.zetnet.co.uk/
clivew/](http://www.users.zetnet.co.uk/clivew/)

AO-16 PACSAT

Catalog number: 20439

Launch Date: January 22, 1990

Status: Semi-operational

Current Mode: V/U

Digipeater - Authorized for APRS usage

Uplink: 145.900 MHz FM 1200-baud
Manchester FSK

145.920 MHz FM 1200-baud
Manchester FSK

145.940 MHz FM 1200-baud
Manchester FSK

145.960 MHz FM 1200-baud
Manchester FSK

Downlink: 437.026 MHz SSB 1200-baud
PSK

Mode-S Beacon: 2401.1428 MHz

Broadcast Callsign: PACSAT-11

BBS: PACSAT-12

[http://www.amsat.org/amsat/sats/
n7hpr/ao16.html](http://www.amsat.org/amsat/sats/n7hpr/ao16.html)

AO-21 AMSAT-OSCAR 21

Catalog Number: 21087

Launch Date: January 29, 1991

Status: Operational

Uplink: 435.041 MHz FM DSP

Downlink: 145.983 MHz FM DSP

GO-32 Gurwin TechSat-1B

Catalog number: 25397

Launch Date: July 10, 1998

Status: Operational

Current Mode: V/U

Downlink: 435.225 MHz FM (9600-baud FSK)
Uplinks: 145.850 FM, 145.890 FM,
145.930 FM, 1269.700 FM,
1269.800 FM, 1269.900 FM

Broadcast Callsign: 4XTECH-11

BBS Callsign: 4XTECH-12

<http://www.iarc.org/techsat/techsat.html>

NO-44 PCSAT

Catalog number: 26931

Launch Date: September 30, 2001
Status: Operational only in Full Sun Light

Current Mode: V

General Usage Uplink/Downlink:
145.827 MHz 1200 Baud

Special Usage Downlink: 144.390 MHz 1200 Baud

<http://pcsat.aprs.org>

Telemetry Decoder program:

http://www.xciv.org/~iain/aprstm/lm_v1.2/

SO-50 SAUDISAT-1C

Catalog number: 27607

Launched: December 20, 2002

Status: Operational

Current Mode: V/U
Uplink: 145.850 MHz FM - 67.0 Hz PL tone
Downlink: 436.795 MHz
Mode and Antenna Polarization:
V: Linear
U: Linear

To switch the transmitter on, you need to send a CTCSS tone of 74.4 Hz.

The order of operation is thus: (allow for Doppler as necessary):

- 1) Transmit on 145.850 MHz with a tone of 74.4 Hz to arm the 10 minute timer on board the spacecraft.
- 2) Now transmit on 145.850 MHz (FM Voice) using 67.0 Hz to PT the repeater on and off within the 10 Minute window.
- 3) Sending the 74.4 Hz tone again within the 10 minute window will reset the 10 minute timer.

AO-51 ECHO

Catalog number: 28375
Launch date: June 29, 2004
Status: Voice Repeater

Current Mode(s): FM Repeater - V/U

Analog voice downlink: 435.300 MHz FM, 435.150 MHz FM, 2401.200 MHz FM

Analog voice uplink: 145.880 MHz FM, 145.880 MHz USB, 145.920 MHz FM,

1268.700 MHz FM - 67 Hz PL tone

Digital Downlinks: 435.150 MHz FM 38k4 Digital, PBP, 435.150 MHz FM 9k6 Digital, Pacsat Broadcast Protocol

2401.200 MHz FM 38k4 bps, AX.25

Digital Uplink: 145.860 MHz FM 9k6 Digital, Pacsat Broadcast Protocol

1268.700 MHz FM 9k6 PBP Digital Beacon: 435.150 MHz

Mode and Antenna Polarization:
T: Linear

V: Linear
U: TX A (usually digital)LHCP

TX B (usually analog) RHCP
L: Linear

S: Linear
Broadcast: PECHO-11

BBS: PECHO-12

[http://www.amsat.org/amsat-new/echo/](http://www.amsat.org/amsat-new/)

VO-52 HAMSAT

Catalog number: 28650
Launch Date: May 05, 2005
Status: Operational
Current Mode: U/V - Indian Transponder

Indian Transponder:
Uplink: 435.220 to 435.280 MHz LSB/CW

Downlink: 145.870 to 145.930 MHz USB/CW
Dutch Transponder:

Uplink: 435.225 to 435.275 MHz LSB/CW
Downlink: 145.875 to 145.925 MHz USB/CW

Indian Beacon: 145.859330 MHz CW
Dutch Beacon: 145.860 MHz 12 wpm with CW message

Mode and Antenna Polarization:
V: LHCP
U: RHCP

<http://www.amsat.in/hamsat.htm>

CO-56 CUTE-1.7

Catalog number: 28941
Launched: February 21, 2006
Status: Constant Carrier only ... 437.3850 MHz CW

Callsign: JQ1YPC
<http://lss.mes.titech.ac.jp/ssp/spacerium/cutelblog/>

CO-57 CubeSat

Catalog number: 27848
Launched: June 30, 2003
Status: Operational
Beacon: 436.8475 MHz CW

Telemetry : 437.4900 MHz AFSK 1200 BPS

Callsign: JQ1YGW
<http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/>

CO-58 CubeSat

Catalog number: 28895
Launch Date: October 27, 2005
Status: Operational - CW Beacon only ... 437.4250 MHz AFSK 1200 BPS

Callsign: JQ1YGW
<http://www.space.t.u-tokyo.ac.jp/cubesat/mission/V/>

The AMSAT group in Australia

The National Co-ordinator of AMSAT-VK is Graham Ratcliff VK5AGR. Contact Graham if you wish to be placed on a mailing list for breaking news and net reminders. As a forum for members AMSAT-VK operates two monthly nets.

AMSAT-Australia Echolink Net

The "Echolink" net meets on the second Sunday of each month. Anyone with an interest in Amateur Radio Satellites is welcome to join the net. Graham VK5AGR acts as net controller. The net starts at 0500 UTC during summer time periods and 0600 UTC during winter standard time periods. Connect to the AMSAT conference server on Echolink a few minutes before these times.

AMSAT-Australia HF net

The HF net meets informally on the second Sunday of each month. In winter (end of March until the end of October) the net meets on 3.685 MHz at 1000 UTC. In summer (end of October until end of March) the net meets on 7.068 MHz at 0900 UTC. Start listening 15 minutes before these times.

All communication regarding AMSAT-Australia matters can be addressed to:

AMSAT-VK
9 Homer Rd
Clarence Park SA 5034

Graham's e-mail address is:
vk5agr@amsat.org

Pictures received by Mineo Wakita - JE9PEL:

<http://www.ne.jp/asahi/hamradio/je9pel/>

HO-59 HITSat

Catalog number: 29484
Launch date: September 22, 2006
Status: Operational
Telemetry Downlink: 437.4250 MHz AFSK 1200 BPS
Beacon: 437.2750 MHz CW
Callsign: JR8YJT

PO-63 PEHUENSAT-1

Catalog Number: 29712
Launch Date: January 10, 2007
Status: In Orbit
Uplink/Downlink: 145.825 MHz FM
Voice Recorder: 145.825 MHz FM
Educational projects not yet issued with an Oscar number.

CAPE1

Launch Date: April 17, 2007
 Status: In Orbit
 Downlink: 435.245 MHz 9600 bps
 FSK AX.25

CP3

Launch Date: April 17, 2007
 Status: In Orbit
 Downlink: 436.845 MHz 1200 bps
 FSK AX.25

CP4

Launch Date: April 17, 2007
 Status: In Orbit
 Downlink: 437.325 MHz 1200 bps
 FSK AX.25

Libertad-1

Launch Date: April 17, 2007
 Status: In Orbit
 Downlink: 437.405 MHz 1200 bps
 FSK AX.25

GENESAT-1

Catalog Number: 29655

KVK Antenna Systems

The

VK G5RV Handbook

by

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fax 07 3216 8075

Launch Date: December 16, 2006

Status: Operational

Telemetry Beacon Downlink: 437.0670
 MHz AFSK 1200 BPS
<http://www.crestnpr.org/genesat1/ahc.html>

International Space Station – the ARISS project

Catalog number: 25544

Launch date: November 20, 1998

Status: Operational

Current Mode: Occasional Voice/
 packet

Digipeater

Expedition 15 crew:

Commander: Fyodor Yurchikhin
 RN3FI

Flight Engineer: Sunita Williams
 KD5PLB

Flight Engineer: Oleg Kotov

Digital/APRS:

Worldwide packet uplink: 145.990
 MHz FM

Worldwide packet downlink: 145.800
 MHz FM

Voice:

Region 1 voice uplink: 145.200 MHz
 FM

Region 2/3 voice uplink: 144.490
 MHz FM

Worldwide downlink: 145.800 MHz
 FM

SSTV TESTING: watch for updates
 on the BB.

Worldwide Reported Downlink:
 145.800 MHz FM

Crossband Repeater:

Repeater Uplink: 437.800 MHz FM
 Repeater Downlink: 145.800 MHz
 FM

Mode and Antenna Polarization:

V: Linear

U: Linear

Callsigns:

German: DPOISS

Russian: RS0ISS

RZ3DZR

USA: NA1SS

Packet Mailbox: RS0ISS-11

Packet Keyboard: RS0ISS-3

Digipeater callsign: ARISS

Official ARISS Webpage: <http://www.rac.ca/ariss>

ISS Daily Crew Schedule: <http://spaceflight.nasa.gov/station/timelines/>

That concludes the list of known 'goodies'. Remembering AO-7's unexpected return some time ago, many operators listen from time to time on the beacon frequencies of the defunct birds. Here is a list of those known to still be in orbit and their beacon frequencies. You may like to download Keplerian elements and listen. Your news could surprise everyone, it's happened before!

NCUBE-2	437.305 MHz
XO-53 SSETI	437.250 MHz
AO-49 AATIS	145.825 MHz
MO-46	437.325 MHz
NO-45 SAPPHIRE	437.095 MHz
SO-42	437.075 MHz
SO-41	436.775 MHz
AO-40	2401.00 MHz
UO-36 UoSAT-12	437.025 MHz
SO-35 SUNSAT	145.825 MHz
PO-34 PANSAT	436.500 MHz
SO-33 SEDSAT-1	437.910 MHz
TO-31 TMSAT-1	436.925 MHz
FO-29 JAS-2	435.795 MHz
PO-28 POSAT-1	429.950 MHz
IO-26 ITAMSAT	435.808 MHz
KO-25 KITSAT	436.500 MHz
KO-23 KITSAT	435.170 MHz
UO-22 UOSAT	435.120 MHz
FO-20 JAS-1b	435.795 MHz
LO-19 LUSAT	437.125 MHz
DOVE DO-17	2401.22 MHz
UO-14 UoSAT-3	435.070 MHz
FO-12 Fuji	435.795 MHz
AO-8	435.095 MHz
AO-10	145.810 MHz
AO-6	29.550 MHz
AO-5 Australis	29.450 MHz
OSCAR III	144.375 MHz
RS-15	29.352 MHz
RS-13	144.860 MHz
RS-12	29.408 MHz

Future goodies

Phase 5a Mars Mission

Proposed Launch Date: 2009 or 2011
 Status: Design Phase
<http://ticket-to-mars.org>

PHASE 3E

Proposed Launch Date: Late 2007
 Status: Under Construction
<http://www.amsat-dl.org/p3e/>

AMSAT-Eagle

Proposed Launch Date: Early/Mid 2009
 Status: Design Phase
<http://www.amsat.org>

Contest Calendar July– September 2007

July	1	Canada Day Contest	CW/SSB
	7	VK/trans-Tasman 160 Metres Phone Contest	SSB
	14/15	IARU HF World Championship	CW/SSB
	21/22	CQWW VHF Contest	All modes
	14	Jack Files Memorial Contest	CW/SSB
	21	VK/trans-Tasman 160 Metres CW Contest	CW
	28	Waitakere (NZART) Sprint	SSB
Aug	4	QRP Day Contest	CW/SSB/FM/PSK31
	4	TARA Grid Dip	PSK/RTTY
	4	Waitakere (NZART) Sprint	CW
	4/5	10-10 International QSO Party	SSB
	11/12	Remembrance Day Contest	CW/SSB/FM
	25/26	Keymen's Club of Japan Contest	CW
	25/26	ALARA Contest	CW/SSB
Sept	1	Russian RTTY WW Contest	RTTY
	1/2	All Asian DX Contest	SSB
	1/2	Region 1 Field Day	SSB
	8/9	Worked All Europe DX Contest	SSB
	15/16	Washington Salmon Run	CW/SSB/Digital
	29/30	CQWW RTTY DX Contest	RTTY

Welcome to another Contesting Column

May saw the CQWW WPX CW contest in full swing, with the lower part of the six non-WARC HF bands alive with contest activity. Conditions were not the best for VK or ZL in general, but this is to be expected at this stage of the sunspot cycle. Ten metres occasionally springs a surprise or two, with openings to the USA or some of the more elusive parts of Africa, according to where you are located in VK. Ten is the band to watch over the next couple of years as sunspot activity is predicted to rise sharply and produce a welcome return of DX in quantity on 28 MHz. The rules for WPX allow a multiplier (in this case, a callsign prefix) to be 'counted' only once during the contest regardless of band, so 28 MHz and 1.8 MHz don't often get a high degree of traffic during this contest as conditions and general geography tend to limit the occupancy as the majority of the prefixes should be attainable on the other bands. The WPX contest is usually best approached with a 'rate' strategy with band and propagation knowledge focussed towards knowing when to change band to enable the

highest number of QSOs per hour, as the number of permitted band changes is limited within a given duration for some entry categories. For SO2R operators, knowing when it is most profitable to break the run-rate on a particular band for a multiplier on the second radio is the key to success.

ANARTS RTTY

By the time this column goes to print, the ANARTS RTTY Contest will have been done and dusted for another year. This is a contest that has had something of a chequered past but continues to provide an interesting format for seasoned operators and an excellent 'training ground' for newcomers to RTTY. Due to personal circumstances, the contest manager, Colin Davies, has relinquished the role to Pat Leeper VK2JPA. Pat can be contacted on patleeper@optusnet.com.au and the rules for the contest are unchanged for 2007. More information can be found at www.anarts.com.au. I'm hoping to have my QRP station back on-air for this one as I want to try my newly assembled rudimentary SO2R setup for RTTY. I tried a 'dummy run' a while ago and it unearthed all manner of issues, but this approach is always best

as problems can be ironed-out prior to actually competing.

Commonwealth Contest – Final Scores for VK Team

The Commonwealth Contest (aka Beru) in March was more of a battle than ever before, with the added twist of Teams being introduced this year encouraging a healthy increase in participation from VK stations.

The new format generated an impressive revitalisation for the contest, with the bands abuzz with CW from around the planet, including some impressive signals from the VK Team. With the comparison made to the competitive spirit within the Cricket World Cup by the organisers as regards the competition element and bearing in mind that the Poms finally got their hands on some ashes in 2006 (but only by burning the Cutty Sark), the contest was a fierce battle which saw ZL as the overall winners and VK coming second. The UK team came fourth.

Final scores by the VK Team are as follows:

Callsign	Points
VK4BUI	2805
VK2NU	2605
VK4EMM	4860
VK6BN	2920
VK2BJ	5045
VK6HD	3055
VK4XA	2585
VK6LW	5335
VK4TT	2770
VK4XY	2845
VK6VZ	3495

Twelfth Man honours go to VK6HG with 2020 points.

Although not on the 2007 VK Team, other local participants included VK2AYD with 3835 points; VK2AEA with 3050; VK2KM with 2690; VK6AJ with 1420; VK8AV with 1340; VK7RO with 700; VK6RZ with 690; VK5HO with 545 and VK5UE with 100 points.

Congratulations to all participants and the Aussies will be back in force in 2008!

Contesting Basics 101

— Part 3

This is the third and final part of 'Contesting 101' unless anyone contacts me with specific requirements for more detail or indeed other topics.

Can I work the same station more than once?

Generally you can only work a station once on each band and mode that is allowed during the contest. For example, in an SSB-only contest, you can only work a station once on each band. In a contest such as IOTA (Islands On The Air) that allows both CW and SSB, you may be able to work a station twice on each band, once on CW and once on SSB. The best advice is: read the rules!

What if I work a station more than once on the same band and mode?

If you claim points for both contacts, you will lose both the points claimed and possibly additional points as a penalty for your error. This sounds a little bit harsh, but with the myriad of software available nowadays this is an unlikely event. It is permissible to work a station multiple times if you only claim points for one of the contacts - usually the first one - but this is a waste of time and won't enhance your score. Remember, the contest is only a finite period of time in

which you are trying to contact as many unique calls as possible.

Why are there different entry categories?

This approach allows contestants to compete against similarly equipped stations, individually, or as part of a team. Some can afford high-power well equipped stations, while others (such as myself) compete with a "barefoot" or QRP transceiver. The different equipment can be reflected in the score, with the simpler stations often achieving a lower QSO count than the big boys - but not always! A lesser equipped station in a rare location can sometimes outperform a high power station in a 'populated' area, as many will call the rare DX but fewer may call the other, easy call. A big signal does not necessarily mean that they'll queue up to work you!

What sorts of categories are there?

The category details depend on the specific contest, but the categories for the CQ Worldwide DX contest are a good example of the possibilities:

- Single Operator High – a single operator, maximum power 1.5 kW (Note: This power limit does not apply in VK, due to licence limitations of course! VK stations entering this category would be limited to 400 W), no DX alerting assistance (for example, DX cluster spots) allowed.
- Single Operator Low – a single operator, maximum power 100 W, no DX alerting assistance allowed.
- Single Operator QRPP – a single operator, maximum power 5 W, no DX alerting assistance allowed.
- Single Operator with DX Spotting Net (also called "Single Operator Assisted") – a single operator, maximum power 1.5 kW, passive use of spotting nets allowed.
- Multi-Operator, Single Transmitter (also called "multi single" or "MS" for short) – any number of operators, but only one transmitted signal allowed at any time. The additional operators will often be listening for new multipliers, and passing the information on to the one transmitter operator.
- Multi-Operator, Two Transmitter (also called "multi two") – Any

number of operators, but only two transmitters. In CQWW, both transmitters may work any stations. In some other contests there are strict restrictions on what the second transmitter may do – for example, it may only be allowed to work new multipliers.

- Multi-Operator, Multi Transmitter (also called "multi multi") – Any number of operators, operating any number of stations, but with only one transmitted signal on each band at any time. In many cases a "multi-multi" station will have a dedicated transmitter for each of the contest bands.

Note that in CQWW, single operator entries can choose to be all-band, or only to work a single nominated band. There's such a range usually available, that finding a section that suits your requirements is not a problem.

What do "SOLP", "SOHP", "SOAB", "SOSB", "M/S", "M/2" and "M/M" mean?

These are all abbreviations for contest entry categories:

- SOLP – Single Operator Low Power
- SOHP – Single Operator High Power
- SOAB – Single Operator all band
- SOSB – Single Operator Single Band, often includes the band, e.g. "SOSB/80" for a single band entry on 80 m
- M/S – Multi/Single – Many operators but only a single transmitter
- M/2 – Multi/Two – Many operators with two transmitters
- M/M – Multi/Multi – Many operators with many transmitters

What is "DX Cluster"?

DX Cluster is the term used to describe a worldwide computer system on which DX stations are reported ("spotted"). It can be accessed via Packet Radio or on the Internet at www.dxsummit.com for example. Use of the system is only permitted if you are entered in an "assisted" category. No matter what category you are participating in you may not enter your own station into the DX cluster, this is called "self spotting" and is frowned upon in all contests.

continued on page 46

2007 Remembrance Day Contest

Peter Harding VK4OD.

Hello once again and welcome to the 2007 Remembrance Day Contest.

Since I proposed changes to the 2006 "Remembrance Day Contest" I have received several suggestions, therefore I would like to take this opportunity to explain the minor changes to the rules for this year.

We want to emphasise the traditional values in this contest to honour our diggers.

This article presents the formal rules for the 2007 Remembrance Day Contest which appear in the contest section of the WIA website and in the AR magazine for July.

The RD Contest is the most important event on the Australian amateur calendar, with heavy participation by individual operators and serious competition between states.

As it was for 2006 we have carried on with the rule to formally make ineligible contacts which may use an Internet connection. Therefore, the use of such things as IRLP or ECHOLINK are now specifically banned.

From this year we have opened the "Receiving Only" category to any licensed stations. **HOWEVER**, if they participate in this category they **CANNOT** take part in any of the transmitting sections.

With the introduction of the Foundation and changes to all licence structures, the 2006 Remembrance Day Contest saw a number of the new "F" calls participating. We look forward to more taking part this year.

This year's changes are aimed at restoring the drive and renewing the enthusiasm in the grand old lady. We specifically wanted to strengthen the RD without confusion and hope the new rules will help the Remembrance Day Contest retain its rightful place as the premier Australian contest event.

The Remembrance Day Contest for 2007 will be held for the 24 hours commencing at 0800 UTC on Saturday 11th August 2007 finishing at 0800 UTC on Sunday 12th August 2007.

Firstly, in essence, what won't change

is the spirit of the thing. We haven't meddled with the basics which make the "Remembrance Day Contest" so very special. The winning state will be the one which stands head and shoulders over the rest. Those things won't ever change. Other things will.

Due to the complexity and in order to simplify the points tabulations, I have simplified the bonus points for the HF operators. Reason is that we have bonus points for HF in 160 and 10 metres, CW, VK0, and also in the midnight to dawn shift.

We have also kept as a non requirement the necessity to show the RST. However if it is sent then, if you wish, you can reflect it in the log and if an operator requests an RST and it is sent, it should represent a true assessment of the received signal. Logs should still show sequential numbers starting at 001, with bonus points tallied at the end of the contest and added to the claimed score.

SSB and CW will continue to be considered separate modes on HF and from this year, subject to licence privileges, any operator who works stations using 10 metres FM above 29 MHz will also have the opportunity to immediately re-log the same station using SSB or CW below 29 MHz.

On VHF, we also encourage increased operation by allowing you to work a station on FM and immediately rework them on SSB or CW, or, indeed, both. This provision was inadvertently changed several years ago when the then manager moved to ban completely automated exchanges between packet stations.

The effect it had, other than to remove the packet robots, of course, was to almost totally eradicate CW and SSB contest operation on the VHF and higher bands in one fell swoop. This year we redress the situation.

Although your VHF log can include stations worked on CW, FM or SSB, we will continue to need separate logs for HF and VHF categories, due to the different rules applying to the two categories.

Many operators concentrate exclusively on VHF and higher band operation, and many of them will have seen that stations which might be very strong on six or two metres could be substantially weaker on 70 cm, and probably all but inaudible on higher bands. From 2005 we sought to address this imbalance by offering reward-based incentives for putting the work into higher band operation.

So, all contacts on bands from and including 23 cm and above attract double points, irrespective of and in addition to any other incentives already offered. 160 metre band HF operators also receive double points, as do all CW operators.

HF operators using either 10 or 160 metres are able to work stations within their own state boundaries, although interstate operation only applies on 80-15 m.

Once again we have not considered allowing WARC band operation, and have decided to restrict HF operation to the 160, 80, 40, 20, 15 and 10 metre bands only.

When polled for comment on a recent VK1WIA broadcast, a number of people asked about multiple contacts. Until 2006, dups were not allowed on HF but were allowed on VHF after only two hours. The VHF arrangements will not change this year. However, repeat HF contacts are allowed after two hours. This will encourage both more and longer operation, and real participation in the fun.

What's more, there's a special time for all operators still on the air between 1 am and 6 am local time. All points scored during those wee hours are doubled. If you work a station whose time zone means they are outside the 1 am to 6 am point, only your points will be doubled. Although the contest runs during UTC times, the special "night owl" loading is determined strictly by your time zone.

Until the 1970s ushered in substantial VHF operations, a very convoluted point-scoring system was in place for HF, in which more points were allocated for contacts spanning multiple call areas than to one's neighbouring states. Even

with computer technology, scoring such a thing could be a time-consuming process indeed, and very confusing for entrants.

For scoring purposes, too, determining the overall winner is a different affair. The Remembrance Day Contest has always been State against State, but determining the winner was a confusing process involving overall improvement factors. These days, who wins is a simple

question of how many people take part from each state and actually submit logs. More than ever before, for your state to win, submitting your log is vital.

Electronic Logging is preferred but by no means mandatory. Those entrants with a suitable PC may wish to consider it for this year's contest log. By using one of these programs, the file that is emailed to me can be imported easily into the scoring database program. Links

for these programs are listed below. I have tried and tested them all and with the assistance of all the creators, parts of their program have been rewritten to assist scoring.

That's a basic summary of the changes. Every one of them is designed to boost your scores without making the scoring too messy for either the competitor or the manager.

Good luck, and good contesting!

2007 Remembrance Day Contest

**Saturday 11 August 0800 UTC
to**

Sunday 12 August 0759 UTC

Presented by: Peter Harding VK4OD
Email: vk4od@wia.org.au

Purpose:

This contest commemorates the Amateurs who died during World War II and is designed to encourage friendly participation and help improve the operating skills of participants. It is held close to 15 August, the date on which hostilities ceased in the southwest Pacific area.

It is preceded by a short opening address by a Guest Speaker transmitted on various WIA frequencies during the 15 minutes prior to the contest. During this ceremony, a roll call of amateurs who paid the supreme sacrifice during WWII is read.

A perpetual trophy is awarded annually to the Australian state or territory with the best performance. The name of the winning State or Territory is inscribed on the trophy, and that State or Territory then holds the trophy for 12 months. The winning State or Territory is also given a certificate, as are leading entrants.

Objective:

Amateurs in each VK call area will endeavour to contact amateurs in other VK call areas, ZL and P2 on all bands except WARC bands. On 1.8, 28, and 50 MHz and above, entrants may also contact other amateurs in their own call area.

Contest Period:

0800 UTC Saturday 11th August 2007
to 0759 UTC Sunday 12th August,
2007. As a mark of respect, stations are

asked to observe 15 minutes' silence prior to the start of the contest, during which the opening ceremony will be broadcast.

Rules:

1. Sections:

- (a) High Frequency for operation on bands below 50 MHz;
- (b) Very High Frequency for operation on and above 50 MHz;

Operators may enter each section, but separate logs must be submitted for each section and for each Callsign used on that section by the operator.

2. Categories:

- (a) Single Operator; and
- (b) Multi-operator.

3. Sub Sections:

- (a) Transmitting Phone (FM, SSB);
- (b) Transmitting CW (CW); Note: CW in this context means CW only; any other digital modes such as Packet, RTTY, AMTOR, PSK31, etc are specifically excluded from the contest.
- (c) Transmitting Open (a) and (b);
- (d) Receiving (a), (b) or (c).

- 4. All amateurs Licensed in Australia, and not physically within VK/P29/ZL as VK's outside VK, may enter the contest, whether their stations are fixed, portable or mobile. See Rule 16.

- 5a. Cross-band and/or cross-mode contacts are not permitted.

- 5b. Operation via any means other than those which use direct radio transmissions is banned. This includes all means such as IRLP or Echolink, which rely on contact via the internet.

- 5c. Contacts via Satellites is also not

allowed for scoring purposes.

- 6. Call "CQ RD", "CQ CONTEST" or "CQ TEST".
- 7a. On ALL bands, stations may be contacted at intervals of not less than two hours since the previous contact on that band and mode.
- 7b. No points will be awarded for contacts between stations in the same call area on HF, except on the 160 metre and the 10 metre bands, on which entrants may work stations in the same call area.
- 7c. On the 10 metre band, contacts may also be made using the FM mode, using simplex only, on frequencies above 29.0 MHz only. This will be considered a different mode for scoring purposes, so an SSB or CW contact could immediately be made with the same station below 29.0MHz for an additional score.
- 8a. On 50 MHz and above, the same station in any call area may be worked using any of the modes listed at intervals of not less than two hours since the previous contact on that band and mode.
- 8b. For the VHF category, up to three contacts may be made with the same station consecutively on each band, but must be made using the different allowable modes of CW, SSB and FM. However, the different modes must be within the frequency ranges stated in the text descriptions of the latest Call Book as 'mode' only. For example, on the two metre band, RD Contest CW contacts may only be made in the range 144.050 to 144.100 MHz. SSB contacts are restricted to 144.100 to 144.400, while FM contacts must be above 146.000

MHz. The national simplex calling channels (146.500 MHz on the two metre band), and the frequencies either side thereof, excluding recognised repeater frequencies, are the suggested frequencies. When changing modes, entrants must also change frequency.

9a. Both single and multi-operator entries are permitted. To be eligible as a single operator, one person must perform all operating and logging activities without assistance other than computer logging, using his or her own callsign. More than one person can use the same station and remain a single operator providing that each uses his or her own callsign, submits a separate log under that callsign and does not receive operating or logging assistance in any way other than computer logging during the contest.

9b. Holders of more than one licence or callsign MUST submit a separate entry for each callsign used.

10a. Multi-operator stations are only allowed one transmitter per band/mode at any one time. Simultaneous transmissions on different bands are permitted. Simultaneous transmissions on the same band but using different modes are permitted. Any large multi-operator stations may find it more convenient to use separate band and/or mode logs.

10b. Automated operation is not permitted. The operator must have physical control of the station for each contact. However CW and voice keyers are permitted, although the use of computers is restricted to logging purposes only.

11a. For a contact to be valid, a three-digit serial number commencing at 001 and incrementing by one for each successive contact must be exchanged between stations making the contact. (RS/RST reporting is not required, but if given should be an accurate appraisal of the signal).

11b Separate logs are required for entrants competing in both HF and VHF sections, although all allowable modes can be contained within each log.

12. Contacts via repeater, satellite or relay are not permitted for scoring purposes. Contacts may be arranged through a repeater, although contact numbers may not be aired there. Operation on repeater frequencies in simplex is not permitted.

13. Score:

- on 160 metres two points per completed valid contact;
- on 23cm or higher bands two points per completed valid contact;
- on all other bands one point;
- on CW irrespective of band, double points.

all scores obtained between the entrant's local time hours of 0100 and 0600 are doubled. If working into an area where the time is outside those hours, the score is doubled only for the station whose local time is 0100 to 0600 hours.

14. Logs should be in the format shown below and accompanied by a Summary Sheet showing callsign; name; address; category; sub sections ; for multi-operator stations a list of the operators; total score; declaration: I hereby certify that I have operated in accordance with the rules and spirit of the contest; signed (postal mail only); date. Please supply a contact telephone number if possible.

15. Entrants operating on both HF and VHF are required to submit separate logs and summary sheets for both categories.

16. VK entrants temporarily operating outside their allocated call area, including those outside continental Australia as defined for DXCC, can elect to have their points credited to their home State by making a statement to that effect on their summary sheet(s).

17a. Logs can be submitted by electronic mail or postal mail:

By mail, send logs and summary sheets to: **RD Contest Manager**. Endorse the front of the envelope **"Remembrance Day Contest"**.

Peter Harding VK4OD 40

Centaurus Cres

Regents Park, QLD 4118.

E-mail, PLAIN TEXT logs only may be sent to rdlogs@wia.org.au

17b. Electronic Logging is preferred

but by no means mandatory. Those entrants with a suitable PC may wish to consider it this year. By using one of these programs, the file that is emailed to me can be imported easily into the scoring database program. Links for these programs are listed below. I have tried and tested them all and with the assistance of all the creators, they have rewritten parts of their program to assist scoring. On completion of the contest you can email the VK?XXXX.csv, which is a comma-delimited file format, which can be imported into our database.

See Software download links note below

17c. In all cases, logs must be received by last mail on Monday 10th September, 2007. Late entries will not be eligible. Electronically sent logs will be returned with a courtesy note, also Snail Mail will be returned unopened.

17d. If you are sending your logs by electronic means, I would recommend that you set the flag to request "confirmation of receipt" and "when the file is read". This way you will receive two confirmation messages. If you do not receive either return message please send me an inquiry mail. For users of Snail Mail send a self addressed envelope with the sample reply form to request a receipt for your paper log, which is available at <http://www.wia.org.au/contests/rd/Reply%20Form.pdf>. HOWEVER in all circumstances the rule as in 17c above WILL STILL APPLY. So get the logs in early.

18. Certificates will be awarded to the leading entrants in each subsection, both single and multi-operator; in each State; P2 and ZL. Entrants must make at least 10 contacts to be eligible for awards, unless otherwise ruled by the Contest Manager.

19. Any station observed as departing from the generally accepted codes of operating ethics may be disqualified.

Determination of winning state or territory

Scoring will be achieved by taking the total number of logs for each State or Territory, divided by the total number of licences issued in that State or Territory (excluding beacons and repeaters) as published in the WIA Callbook for that year, and multiplying by the total score for that State or Territory. Points can only be considered where a station has submitted a valid log.

Unless otherwise elected by the entrant concerned, the scores of VK0 stations

will be credited to VK7, and the scores of VK9 to the mainland call area which is geographically closest. Scores of P2, ZL and SWL stations will not be included in these calculations, although entrants in those areas are eligible for all certificate awards.

Receiving Section Rules

1. This section is open to all SWLs in Australia, Papua New Guinea and New Zealand. Licensed operators may enter this section but this will make them ineligible to also compete in the Transmitting sections.

2. Rules are the same as for the Transmitting Section. Double points will apply to ALL received CW contacts, and contacts received between 01:00 and 06:00.

3. Only completed contacts may be logged, it is not permissible to log a station calling CQ.

Layout of logs:

The log should be in the format shown below, whether submitted electronically or via the postal mail. Sample logs are available on the WIA and local website or may be posted on request, with a stamped, self-addressed envelope.

Sample Summary Sheet:

Remembrance Day Contest 2007

Callsign: VK1XXX

Name: Operator's full name

Address: Physical address of contest station

Category: Single or Multiple Operator

Section: HF or VHF

Sub Section: Transmitting Phone, CW or Open (both)

Total Score: number of points claimed

Declaration:

I hereby certify that I have operated in accordance with the rules and spirit of the Contest.

Signed: Your signature if log is submitted via mail.

Date: date submitted

Sample Transmitting Log

Remembrance Day Contest 2007

Callsign: VK1XXX

Category: HF or VHF / Single or Multiple Operator

Section: Transmitting Phone, CW or Open

Time (UTC)	Band (MHz)	Mode	Call	Number Sent	Number Rcvd	Pts
0801	14	CW	VK2QQ	001	002	2
0802	14	SSB	VK6LL	002	001	1
0806	14	SSB	VK5ANW	001	003	1
0808	14	SSB	ZL2AGQ	004	004	1
0811	14	SSB	VK4XX	005	008	1

Contesting Basics 101 – Part 3 continued

What category should I enter?

If you don't have a linear amplifier or cannot use one for reasons of neighbourly harmony, then the single operator low power section is an attractive option. You don't have to compete with all the larger signals in the high power category. If you are an experienced QRP operator, then by all means choose QRP instead, but if you are not, you may find this category

a bit frustrating as you will have to learn how to make your QRP signal heard while learning the ropes of contesting at the same time. If your antenna system is limited then you may want to enter single-band or, like me, enter all-band anyway even though I've only a restricted range of antennae available. I tend to erect a couple of temporary antennae for a band or two which are

then dismantled after the contest.

If you have any contest related material for inclusion within the column, topics that you'd like covered or even some experiences and pictures you'd like to share, then please feel free to get in touch via vk2baa@wia.org.au. See you on the bands.

73 de VK2BAA Phil Smeaton

Australian Ladies Amateur Radio Association Inc.

27th ALARA Contest

NOTE: Contest is always on the last FULL weekend of August.

ELIGIBILITY: All licensed operators throughout the world are invited to participate. Also open to SWLs.

OBJECT: Participation: YL works everyone, OMs & Clubs work YLs only.

One contest (combined phone and CW) run over 30 hours.

STARTS: Saturday 25th August 2007 at 0600 hours UTC

ENDS: Sunday 26th August 2007 at 1159 hours UTC

SUGGESTED FREQUENCIES: Bands to be used are 3.5, 7, 14, 21, and 28 MHz only.

The following are suggested frequencies for easier location of contacts:

28.380 to 28.410
21.170 to 21.200 and 21.380 to 21.410
14.250 to 14.280
7.070 to 7.100
3.560 to 3.590

OPERATION:

Every individual phone or CW contact may be counted.

There must be an interval of greater than 1 hour between contacts with any one station on any one band and in the same mode.

No net or list operations.

No crossmode operations.

No crossband operations.

All contacts must be made in accordance with operator and station licence regulations.

PROCEDURE:

Phone: call "CQ ALARA CONTEST"
CW: YLs call "CQ TEST ALARA"
OMs call "CQ YL"

EXCHANGES:

ALARA member: RS or RST, serial no. starting at 001,
ALARA member, name.

YL non-member, OM or Club: RS or RST, serial no. starting at 001,
name, and whether Club station.

OMs, Clubs & SWLs work YLs only.

SCORING:

Phone: 5 points for ALARA member contacted
4 points for YL non-member contacted
3 points for OM or Club station contacted

CW: All contacts made on CW count for double points

OM, SWL, & Club: 5 points for ALARA member logged
4 points for YL non-member logged

Sample Log:

Date UTC	Time UTC	Band MHz	Mode	Callsign	RS(T) & Serial No. Sent	RS(T) & Serial No. Recd	Name	Points
30/08	0135	28	SSB	VK6DE	59001	58028	Bev	5
	0141	21	CW	VK3KS	599002	599045	Mavis	10
	0600	14	SSB	FK8FA	59025	59011	Aimee	5
	1100	3.5	CW	VK7LUV	599129	599004	Susan	10
	1103	3.5	SSB	VK3BSP	59130	59006	Joe (Club)	3

LOGS: Single log entry. Logs must show date/time UTC, band, mode, callsign worked, report & serial no. sent, report & serial no. received, name of operator of station worked, whether it is a Club station, and points claimed.

LOGS MUST BE SIGNED. Logs also to show full name, callsign and address of operator, and show final score (points claimed). Logs must be legible. No carbon copies. No logs will be returned. Decision of the Contest Manager will be final, and no correspondence will be entered into.

Logs must be received by the Contest Manager by: 30th September, 2007.

CONTEST MANAGER: Mrs. Marilyn Syme VK3DMS

99 Magnolia Ave.

MILDURA.3500

OR: alaracontest@wia.org.au

Vic. Australia

CERTIFICATES will be awarded for the following:

Top score overall

Top score phone only

Top score Australian YL CW

Top score DX YL

Top score ALARA member in each country and VK call area

Top score YL non-member in each continent

Top score OM in each continent

Top score SWL in each continent

Top score VK YL Foundation Licence holder

Top score overseas YL CW

Top score VK Club station

A TROPHY will be awarded to the following:

Top scoring Australian YL

Top scoring Foundation Licence ALARA Member

CLUB STATIONS: Operators of Club stations may use the Club call only for contacts, and MUST identify each contact as with a Club station. Use of personal callsigns while operating as a Club member is not permitted.

PLEASE NOTE: This Contest is always held on the last complete weekend of August.

John Moyle Memorial National Field Day 2007

Denis Johnstone VK4AIG/VK3ZUX
Contest Manager

24 Hour Portable Operation – Multiple Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK2SRC	Multi	Phone	All	565	7170	*
VK3CNE	Multi	Phone	All	523	5568	*
VK4WID	Multi	Phone	All	336	2216	*
VK2HZ	Multi	Phone	All	171	2020	*
VK2MA	Multi	Phone	All	251	1662	*
VK4WIS	Multi	Phone	All	429	1218	
VK5ARC	Multi	Phone	All	179	1044	
VK4BAR	Multi	Phone	All	306	908	
VK5BRL	Multi	Phone	All	264	906	
VK4WAT	Multi	Phone	All	419	838	
VK2FRE	Multi	Phone	All	57	816	
VK2AWX	Multi	Phone	All	280	746	
VK1YBQ	Multi	Phone	All	296	592	
VK2BOR	Multi	Phone	All	116	586	
VK3III	Multi	Phone	All	67	442	
VK8DA	Multi	Phone	All	30	60	
VK3ER	Multi	Phone	VHF	325	7082	*
VK3LY	Multi	Phone	VHF	129	4170	*
VK3ZPF	Multi	Phone	VHF	126	1560	*
VK2EH	Multi	Phone	VHF	39	850	
VK2ATZ	Multi	All	HF	1019	2034	*
VK4IZ	Multi	All	HF	874	1738	*
VK5BAR	Multi	Phone	HF	461	922	*
VK4TI	Multi	Phone	HF	391	782	*
VK4WIT	Multi	Phone	HF	171	342	*
VK4KKN	Multi	Phone	HF	167	334	
VK7OTC	Multi	Phone	HF	134	268	
VK6SCS	Multi	Phone	HF	106	212	
VK2WZ	Multi	Phone	HF	30	60	

24 Hour Portable Operation – Single Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK1DA	Single	Phone	All	117	3366	*
VK5AR	Single	Phone	All	119	1966	*
VK4TGL	Single	Phone	All	60	944	*
VK2ZTY	Single	Phone	All	108	435	
VK2UVP	Single	Phone	All	10	28	
VK4TRX	Single	Phone	VHF	22	266	*
VK5MFV	Single	Phone	HF	433	864	*
VK4JM	Single	Phone	HF	124	248	*
VK4EV	Single	Phone	HF	91	182	*
VK3UBM	Single	Phone	HF	66	132	
VK3MV	Single	CW	HF	24	48	***

Six Hour Portable Operation – Multiple Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK3AWS	Multi	Phone	All	137	1262	*
VK2WG	Multi	Phone	All	348	920	*
VK2BTW	Multi	Phone	All	104	376	*
VK4NRL	Multi	Phone	HF	104	204	*
VK4WIM	Multi	Phone	HF	70	130	*

Six Hour Portable Operation – Single Operator

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK3HY	Single	Phone	VHF	58	1362	*
VK3PRA	Single	Phone	VHF	25	182	
VK4JAZ	Single	Phone	VHF	14	80	*
VK5OQ	Single	Phone	All	65	256	*
VK5JQ	Single	Phone	All	23	108	*
VK6ZN17	Single	Phone	HF	121	242	*
VK2IO	Single	Phone	HF	69	138	*
VK4FHYH	Single	Phone	HF	55	110	*
VK2FDMB	Single	Phone	HF	50	100	
VK6AVO	Single	Phone	HF	32	64	
VK3ECH	Single	Phone	HF	15	30	
VK2AYD	Single	CW	HF	15	30	*
* Certificate Awarded						
** President's Cup						

Home Station – 24 Hour

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK4FIGA	Home	0	0	222	350	*
VK3KE	Home	0	0	212	346	*
VK2HBG	Home	0	0	208	303	*
VK2CZ	Home	0	0	170	220	
VK4HTM	Home	0	0	118	214	
VK4FABC	Home	0	0	138	202	
VK3AAK	Home	0	0	85	159	
VK3AVV	Home	0	0	60	111	
VK2TZA	Home	0	0	103	102	
VK4AN	Home	0	0	55	97	
ZL1TPH	Home	0	0	26	51	
ZL2CQ	Home	0	0	16	28	

Home Station – 6 Hour

Call Sign	Operators	Mode	Band	Contacts	Score	Award
VK2ZEN	Home	0	0	105	155	*
VK2KDP	Home	0	0	65	109	*
VK2EI	Home	0	0	64	108	*
VK3BML	Home	0	0	63	100	
VK2JAM	Home	0	0	22	41	
VK5RG	Home	0	0	6	11	

Comments on John Moyle Memorial National Field Day 2007

This year's entries came from every Australian mainland call area and Tasmania. However there were only two entries from across the Tasman from ZL. An effort will be made in 2008 to suggest to the NZART to inspire some more interest among amateurs in ZL.

I have included all of the results that I received in total and if any are missing, they are completely lost and I can only offer my apologies to anyone affected. I believe that all logs submitted are included in the scoring. I am sorry if your log is missing, but it did not get to me despite my most careful procedures.

Based upon submitted logs, there were some 12,535 contacts amounting to some 64,028 points claimed. This was pretty heavy contesting, but it resulted in only some 76 logs being submitted. This is around the same as previous years. Unfortunately, the number of stations who went to the bother of going out and setting up as a portable station and then not bothering to submit a log as an entry is a disappointment. Perhaps we can put in a little bit more effort next year? Some multiple operators got very big scores and perhaps a revision of the rules for large club stations is worth considering.

Band	UHF		VHF		HF		Total
	Contacts	Points	Contacts	Points	Contacts	Points	
10 GHz	1 (0)	30 (0)					
5.7 GHz	1 (0)	30 (0)					
2.4 GHz	4 (2)	120 (100)					
23 cm	94 (140)	1670 (1469)					
70 cm	777 (854)	12375 (10317)					
2 m			1545 (1528)	24410 (23185)			
6 m			436 (487)	6813 (6556)			
10 m				25 (33)	49 (66)		
15 m					125 (82)	248 (164)	
20 m					1646 (831)	3276 (1642)	
40 m					6041 (4647)	11402 (8974)	
80 m					1831 (1812)	3596 (3494)	
160 m					9 (31)	18 (62)	
Total	877 (996)	14225 (11886)	1981 (2105)	31223 (29741)	9677 (7436)	18580 (14402)	

Table should be read – 2007 results (with 2006 results in brackets)

Many of the portable stations that went to the effort to send in a log got a certificate. I believe that people who made the effort to set up a portable station and operate should be acknowledged. Do the rules need a revision to reward such effort?

Only four Foundation licence operators bothered to submit a log. (One from VK2 and three from VK4.) There were many more than this logged during the contest. Perhaps they can be better advised next year? All Foundation operators who submitted logs were awarded a certificate. It is interesting

to note that there were no logs from any Foundation licence operators in VK3.

Activity was carried out on all bands permitted under the rules. There was very noticeably increased activity on HF, but the frequencies followed the declining sunspot cycle. This is very close to the bottom and so conditions are likely to improve substantially next year. In the higher Microwave bands there was very limited activity. Maybe it follows a weather cycle, rather than the solar cycle? VHF and UHF activity hardly altered, with the higher scoring reflecting the higher points allowed for increased numbers of longer distance contacts.

The participation across the various Call Areas was patchy. There was one interesting observation from these results in that the weather was a possible explanation of the very poor turn out of portable stations in VK3 and the much improved turn out in VK2 and VK4.

Call Area	Portable	Home	Total
VK1	2	1	2
VK2	17	18	24
VK3	11	12	15
VK4	16	13	20
VK5	7	11	8
VK6	3	1	3
VK7	1	1	1
VK8	1	3	1
ZL	0	0	2
	58	60	76
			78

The scoring on VHF may need further revision as the scores produced on VHF seems to exceed the scores on HF, where the effort required to get a high score, far out weighs the comparative effort on VHF. However, this is not the nature of contesting where HF takes time and effort to work the number of stations required, while VHF and UHF requires the vagaries of weak signals to guarantee a contact?

VK3 had a lower number of stations operating either as a portable or home station. Maybe next year we can get a few more stations especially portable ones in VK3? Perhaps the weather could be kinder next time?

There were many more electronic logs submitted this year. This has been due largely to the excellent work by Mike Subocz (VK3AVV) and his worthy program VKCL (VK Contest Log). Those that submitted a log in the VKCL export format were extremely easy to work with. Those that simply forwarded the text output of VKCL were also rather simpler to work with than a paper log by hand.

Unfortunately there were still a few individuals who submitted their log only handwritten on paper; while this can be integrated into the scoring it cannot be manipulated electronically and was harder to use. Finally there were a few who sent a log submission in an electronically unreadable form and they were asked to resubmit their logs which they subsequently did and were included.

This year, the rules stated that Excel is the preferred submission format. A sample linked Excel logging report was prepared and sent to those who requested this file. Pleasingly many logs used this easy-to-use sample as the basis of their

submission. (Contact me at vk3zux@hotmail.com if you would like a copy of my linked spreadsheet in Excel for next year.) Other suitable file submission formats are Word or the ADI output file from VK Contest Log. Text files or paper files can also be used.

There were a few who complained about the scoring process again this year. These complaints fell into three main categories.

1. The comparative difference in score and scoring between HF and VHF/UHF contacts.

Table of alternative categories

Operators	Time	Modes		Bands		
		Phone	CW	All	HF	VHF
Multi	24	Phone	CW	All	HF	VHF
Multi	6	Phone	CW	All	HF	VHF
Single	24	Phone	CW	All	HF	VHF
Single	6	Phone	CW	All	HF	VHF
Home	24					
Home	6					
SWL	24					

In fact within the John Moyle Contest, the rules allow for some 27 possible alternative categories as shown above. Each category is actually completely independent from every other category and so there are in fact 27 parallel contests. In this way, it is completely different from any other contest presently in Australia.

For this reason it is not possible to have an overall winner in this contest, as scores from any category especially between different bands and different modes are not comparable. Only scores within the same category are correctly comparable. Hopefully this will explain the most common source of concern.

2. The second most contentious area is the 'Non Phone' modes.

In this contest, CW is the only 'non-phone' mode allowed for within the rules. All other forms such as TTY, PSK, JT65 etc are simply treated as CW. However, many comments were received as to whether these 'Digital Modes' could be used. There are many concerns regarding these computer based modes. Mainly to do with the very large scores that could be amassed with a bit of planning and the use of automatic calling CQ.

- (a) What assurance can be given that the contacts were in fact using a human operator and not simply a fully automatic station?
- (b) Do these modes allow for the exchange of correctly formatted numbers as required by the rules? (Some modes use specially shortened calling cycles and their own detailed exchange methods).
- (c) Would a further 'Digital Mode' be required in the rules to cope with the range of options?
- (d) What distinct modes among the many available options are acceptable?
- (e) What format would the log output require to be to present the contact exchange information in an acceptable form?
- (f) Would a separate 'Digital Only Contest' be the better solution by creating a more even playing field?

I look forward to comments and feedback on these options.

3. Next, we have a rather non contentious issue of scoring for CW (hand) contacts.

A few people made comments that they had wanted to make CW contacts and others were not prepared or not able to exchange numbers in CW. In addition there were very few logs actually submitted claiming CW contacts.

The comment was made that CW is probably dead or at least close to dying.

A further suggestion was made to allocate a higher point score to a CW contact.

While CW is no longer a precondition for obtaining an Amateur licence, it is a skill that is widely distributed among existing operators and a skill that should be nurtured among the newer licence holders. It is my view that to enhance the number of CW contacts a higher point scoring could be allocated for contacts completed in CW compared to a 'Phone' contact.

I would like to consider increasing the number of points allocated for CW contacts, but I prefer some feedback from you before including any changes in the rules for 2008.

4. The number of people who submitted logs claiming 'All Modes' and only logged contacts using SSB or FM.

The Modes allowed in the rules are PHONE (SSB or FM) and CW (Manual or Digital Mode). The PHONE Modes are SSB, DSB, FM or AM. That is the modulation is an audio signal derived in the first instance from a microphone.

The alternative is CW, either hand or computer derived, that simply turns the carrier on and off. The plethora of other 'Digital Modes' are discussed above (2).

This should reduce the possible confusion next year? (VK Contest Log will need a wider choice of options as some of the confusion came about from the program.)

5. The complexity of the VHF/UHF scoring system that differs from all of the other contests conducted in these bands in Australia.

It is agreed that the different scoring system between the John Moyle Memorial National Field Day Contest, compared with the Ross Hull and the Spring & Summer Field Day contests, makes for a marked degree of confusion. I have received quite a number of comments in this regard and I intend to discuss with the other contest managers the possibility of a comparable method of scoring on VHF and UHF.

The rules have evolved over time and reflect a changing climate as far as VHF/UHF operations. The relative ease of setting up an efficient station with modern equipment may overly reward the effort involved?

It is maybe time to reconsider the scoring principles involved and the method of calculating scores. I welcome your feedback on the topic.

6. Finally there was discussion about the massive scores accumulated by multi-operator club stations being so much higher could possibly be achieved by a single operator.

It is my view Multi-operator stations and Single operator stations already are separate categories and so are not competing against each other. Looking at the scoring above it is clear that a capable single operator can produce a very creditable score.

I do not think any difference in scoring rate between single and multi stations will achieve anything more than providing more confusion. I however, look forward to any further comments.

If you have any contribution to the topic, the Rules for this contest available at <http://www.wia.org.au/contests/> already contain my contact information and feel free to contact me

with your submission. If sufficient interest is raised, it can be assembled into a topic for subsequent publication in AR.

Well done to all of those that participated in the contest and well done those who bothered to submit a log. It is hoped that the number of logs to be submitted next year will continue the current trend of increased log numbers.

I wish to thank those who did send in photographs of their equipment set-up and personnel involved for inclusion in the AR magazine. These have been submitted to AR along with this report. Please give Peter Freeman vk3kai@wia.org.au anything else you have for later use for this magazine.

ar

Breakdown of Contacts by Call Area and Band

	10 m	10 m	15 m	15 m	20 m	20 m	40 m	40 m	80 m	80 m	160 m	160 m
	P	C	P	C	P	C	P	C	P	C	P	C
VK1	2	1	0	0	24	12	486	243	76	38	0	0
	0	0	0	0	10	5	112	56	2	1	0	0
VK2	3	2	40	20	726	365	4231	2333	1277	660	0	0
	4	2	10	5	172	89	3277	1695	1312	695	40	20
VK3	0	0	4	2	167	85	644	346	317	163	6	3
	8	4	8	4	120	60	1120	598	416	215	6	3
VK4	40	20	192	97	1658	837	3959	2076	1278	644	12	6
	52	26	116	58	833	419	2719	1364	1158	580	14	7
VK5	2	1	10	5	366	184	1663	833	474	237	0	0
	2	1	4	2	120	60	1379	719	373	189	2	1
VK6	0	0	0	0	126	63	298	149	94	47	0	0
	0	0	0	0	87	48	110	81	132	66	0	0
VK7	0	0	0	0	108	54	96	48	64	32	0	0
	0	0	0	0	18	9	141	76	75	53	0	0
VK8	2	1	2	1	50	25	4	2	0	0	0	0
	0	0	26	13	282	141	116	58	26	13	0	0
ZL	0	0	0	0	42	21	21	11	16	10	0	0
	0	0	0	0	0	0	0	0	0	0	0	0

Numbers in Bold are 2007 and others are 2006



Gippsland Gate Radio & Electronics Club

On 21st July 2007,

the Club shall be conducting its annual

HAMFEST SALE

for the sale of new and used electronics and radio equipment.

As last year, the venue will be at the

Cranbourne Community Hall

on the corner of Clarendon and High Streets, Cranbourne.

High Street is part of the Sth Gippsland Highway. Melway 133 K4.

The doors will open for buyers at 10 am with a \$6.00 entry fee.

VHF/UHF – an expanding world

David Smith VK3HZ – vk3hz@wia.org.au

Weak Signal

David Smith – VK3HZ

Over the weekend of May 26th to 27th, a slow-moving high-pressure cell once again produced some good tropospheric enhancement over the south-eastern part of the country.

Chas VK3PY reports that he had some notable contacts:

I saw the opening coming on the Hepburn map earlier in the week and had the foresight to arrange a sked with Mark VK2EMA in Tottenham (central VK2) for Saturday morning. I particularly wanted his grid (QF37) on 1296 MHz. We started on 2 m with reasonable signals, up to 5x5 at times. Moving to 70 cm improved things with signals consistently hovering around S9. Our initial attempt at 1296 was a struggle, but while rag-chewing on 432 Mark noted my signal had built up to over S9, and suggested we try 1296 again. This time it was a pushover with 5x3 signals both ways. The distance is nearly 700 km - not bad going, and grid number 38 is in the bag.

Saturday morning I also worked Colin VK2FABV in West Wyalong on 2 m for a new grid on that band. He was 5x2 and gave me 4x3.

Another notable contact was Leigh

VK2KRR. Ordinarily, Leigh puts a pretty healthy signal on 144 and 432 at my QTH anyway, and we seem to be able to work at will on 1296, but Saturday evening his 1296 signal was staggeringly strong, prompting me to grab my digital camera and record a movie of one of his overs. It's 38 MB - Leigh can talk!

Thanks for that, Chas. The movie hasn't appeared on the YouTube Featured Videos yet – hi!

Jim VK3II was also having some success, as he usually does from his good location:

I worked Colin VK2FABV on 2 m SSB on Saturday 0901 hrs – 0905 hrs (local) at 5x2. I think he also worked VK3AAK and VK3HZ before me. I also worked Colin again on Sunday for over 15 minutes, starting at 1000 hours (local). His SSB signal got up to 5x4 at times. Colin has a pair of stacked 10-element Yagis at 60 ft. His QTH is Wyalong - a 524 km path for me. Not bad for 10W

It's great to see our newest class of amateurs becoming seriously interested in the "right" end of the 2 m band. We should do what we can to encourage this – it can only be a good thing to have more

active VHF/UHF stations spread across the country.

Speaking of stations spread across the country, Peter VK5ZPG in Quorn – 40 km north of Port Augusta – is one of our more remote VHF enthusiasts. His closest opportunities for contacts are in the Adelaide area – a distance of around 300 km. Nevertheless, Peter is quite active in the VHF arena using any possible propagation modes that will achieve long-distance contacts – Aircraft Enhancement and Meteor Scatter being two of the main ones.

Peter has been hard at work improving his station. He reports: the 'new' linear (AM17) is up and running, putting out a conservative 300 to 350 watts PEP. A 40-foot tower has been purchased and is yet to be delivered. Until then, I'm limited to a Yagi height of only 18 feet. Being a little out of the way re beam headings for operators between capital cities, hopefully these improvements will help attract a little more attention.

We look forward to some big signals from Quorn when summer comes around.

Please send any Weak Signal reports to David VK3HZ at vk3hz@wia.org.au.

Digital DX Modes

Rex Moncur – VK7MO

Welcome to George VK4AMG, who has been participating in the FSK441 Meteor Scatter Activity Sessions for several weeks on 144.230 MHz. These are held from 7.00 to 8.00 am NSW/Vic local time each Saturday and Sunday morning. George is still to complete a QSO but he has got close by exchanging callsigns and reports and just missing out on those RRs for confirmation. Persistence will pay off – good luck George.

Local EME: Sometimes, if a local signal is not too strong, it is possible to complete EME QSOs on JT65 with stations only a 100 km or so away. The direct signal will normally be much stronger but it is often possible to see the weaker Moon Echo because it will come back on a slightly different frequency due to Doppler Shift. Around Moonrise, the Doppler on 2 metres will shift the signal up around 300 Hz and

proportionally greater on the higher bands. If you see two sets of the JT65 reference tones when beaming towards the moon, check the Doppler on WSJT to confirm that the signal is coming from the Moon. Then you can use the freeze/tolerance facility on WSJT to select only the signal from the moon and complete a local EME QSO.

Please send any Digital DX Modes reports to Rex VK7MO at rmoncur@bigpond.net.au.

The Magic Band – 6 m DX

Brian Cleland – VK5BC

May produced several sporadic E openings particularly from Queensland to VK2, 3 and 5. The openings weren't always of long duration with only medium signal strengths.

On 16th May, there was a brief opening

from VK5 to VK2. The VK2RHV beacon was audible in VK5 with Paul VK2BPL working Brian VK5BC.

Then on 18th May, the band opened for several hours from VK5 to VK2, VK4 and FK8. Unfortunately, not a lot

of contacts were made but Brian VK5BC worked John VK2BHO, Paul VK2BPL and John VK4KK. The FK8SIX beacon was audible up to S3 for nearly 3 hours. At the same time, the band was open

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DX-News & Views

John Bazley VK4OQ

P.O. Box 7665, Toowoomba Mail Centre, QLD 4352.

Email: john.bazley@bigpond.com

We have been waiting for quite some time for the ITU to allocate a prefix for Montenegro. I am sure that all DXers will remember that Montenegro gained independence in late June 2006 and had been using the following prefixes: 4O3, 4O6, YT3, YT6, YU3, YU6, YZ3 and YZ6. The International Telecommunications Union did not want to give the new country a new prefix and required the states of Montenegro and Serbia to agree upon one or two prefixes of the five (4N, 4O, YT, YU, YZ) from the former country of Serbia/Montenegro. On May 11th, an agreement was made and the ITU now lists the 4O (Four Oscar) prefix as belonging to Montenegro. So Montenegro can use 4O0 (Four Oscar Zero) through 4O9 (Four Oscar Nine). Serbia will continue to use the YT and YU prefixes. This will include all call areas (0-9) for each. However the 4N and YZ prefixes have been given back to the ITU for future use by another nation. This has been confirmed by a spokesman from the ITU Radiocommunication Sector. When asked exactly when the two nations need to complete this change – the response was “as soon as possible”. So there may be a short period of time to complete the switch over.

Serbia: YT0, YT1, YT2, YT3, YT4, YT5, YT6, YT7, YT8, YT9, YU0, YU1, YU2, YU3, YU4, YU5, YU6, YU7, YU8 and YU9.

Montenegro: 4O0, 4O1, 4O2, 4O3, 4O4, 4O5, 4O6, 4O7, 4O8, 4O9.

DXers need to update their logging software, carefully!

RSGB IOTA Contest – July 28/29, During this event, at least half of the 10 Florida IOTA groups will be QRV by members of the South Florida DX Association. They are hoping to activate all ten! So far activity will be from the following island groups:

IOTA	Name of Island	Ops
NA-138	Amelia Is.	K9ES
NA-141	Hutchinson Is.	W4UM K1PT
NA-062	Florida Keys	K4MM N2NL K4EYS
NA-079	Dry Tortugas	

NA-052 Marco
NA-069 Sanibel
NA-034 Honeymoon, St. N2MFT
Armands, etc.
NA-076 Cedar Key
NA-085 St. George N4PN
NA-142 Santa Rosa N4OX and
NF4A

VE Cezar VE3LYC and Ken G3OCA are planning an IOTA operation from East Pen Island, VY0 (NA-231, new one) between 20 and 22 July. They are prepared to have two stations on the air operating CW and SSB from 10 to 40 metres. QSL via VE3LYC, direct or via the bureau. Cezar says that East Pen Island is “the breeding place of polar bears, which brings interesting challenges to the team”.

IV The 4M5 DX Group members YV5WW, YV5OHW, YV5RED, YV1RDX, YV1CTE, YV5TX and YV5SSB will be active (SSB, CW and RTTY) as YW1DX from Cayo Sombrero (SA-089) on 27-30 July, including the IOTA Contest. Before and after the contest they will concentrate on the WARC bands. QSL via IT9DAA.

VP9. Paul G4BKJ operated CW only as VP9KF from Hamilton Parish, Bermuda (NA-005) from May 15th to June 5th, including the CQ WW WPX CW. QSL to W4/VP9KF (Paul Evans, 6809 River Road, Tampa, FL 33615, USA). Further information can be found at <http://vp9kf.com>

While on the subject of VP9 Bermuda, readers may not be aware of “The Worked All Bermuda Award” that is awarded to any amateur radio operator, worldwide, who confirms contact with a Bermuda amateur in each of the nine parishes on the island. Verification will be valid copies of QSL cards from the local operators. The award is a superb map of Bermuda, signed by the Governor in power at the time and is provided free of charge. Well worthwhile working for.

BS7 –Scarborough Reef. The recent operation from Scarborough Reef has been approved for DXCC credit.

Quite a number of QSOs (1380, most of them on 30 m) did not make it into the initial on-line log. The problem has now been fixed and the log now contains

45,820 QSOs from 13.48 UTC on 29 April through 23.54 UTC on 5 May with 17,884 unique callsigns. The new band mode breakdowns are as follows:

Band	SSB	CW	RTTY	TOTAL
160 m	0	54	0	54
80 m	121	217	0	338
40 m	509	3039	0	3548
30 m	0	4226	0	4226
20 m	10391	11435	54	21880
17 m	3325	3744	0	7069
15 m	4011	1985	268	6264
12 m	402	474	0	876
10 m	841	724	0	1565
	19600	25898	322	45820

The continental breakdowns are: Asia 21112, Europe 16329, North America 6918, Oceania 948, South America 301, and Africa 212. Several statistic tables can be found at <http://www.scarboroughreef.com/srstats.html>

The following note was issued by Steve who is handling the QSLs for BS7H.

I have received quite a number of 'QSO not in logs' questions in the last week, such as - I forgot my QSO detail, - my dog/significant other animal/kid /etc trashed my log! So let me help with some ground rules:

I'm not in a position to answer whether you are in or not in the log at the moment. Rather than ask via email, I'd ask you to kindly put the inquiry in a NOTE with your QSL to me. I'll research the log as I work your QSL request, and respond accordingly. If you are NOT IN THE WEB log, don't give up, put down EVERY QSO you believe you had, and I'll do the rest. If the web log shows 20 SSB, put down EVERY QSO you think you had on 20 SSB, not just the first. Don't be embarrassed with dups, rather, give me all the QSOs you've had. I'll see the dups anyway, but if you are not in the log the first time, it will save me a lot of time researching. Remember, every researched call takes time from processing other cards. If it's a busted call, I'll use well-established judgment in issuing the card, and may ask you to help confirm that the person whose call appears did NOT make a QSO.

If you DO NOT HAVE ANY detail besides what is in the web log online, it's impossible for me to give you credit for the card. I need to have SOME

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VHF/UHF – an expanding world *continued*

between VK4 and VK2 with the FK8 beacon being audible in both states. John VK4TL and VK4ZFC in Far Northern Queensland worked several VK2's including John VK2FAD at Budgewoi and Dave VK2JDS near Bathurst. Kevin VK4BPK at Mackay also worked John VK4KK near Gympie.

The 19th May saw another opening from VK5 to VK4. The VK4RTL Townsville beacon was up to S9 in VK5 with Brian VK5BC again working John VK4KK.

Another opening on the 21st May - this time Kevin VK4BPK working John VK2BHO near Wollongong, Brian VK2AH at Bulli and Rob VK3XQ in Melbourne. At the same time, Allan VK4ID was hearing the VK5RBV beacon up to S7 and completed a contact with Brian VK5BC.

On 26th May, the band again opened from far Northern Queensland to VK5 with the Townsville VK4RTL beacon being heard in VK5. Brian VK5BC completed contacts with Andru VK4KAY in Mackay and Peter VK4APE in Charters Towers. The same day Norm VK3DUT reported hearing the VK5VF and VK5RBV beacons as well as the ZL TV and Karl VK7HDX in Launceston reported the ZL TV.

On 27th May, Jack VK2XQ in Sydney

reported the ZL TV being audible for some time and working Bob ZL3NE in Auckland. Jack also reported the Hobart VK7RST beacon. The same day, the Alice Springs VK8RAS, Longreach VK4ABP and Townsville VK4RTL beacons were all audible along with the Toowoomba TV sound (51.672 MHz) in VK5. Brian VK5BC worked Allan VK4ID, Glen VK4BG (ex VK4TZL) and Mick VK4ZAA. Weak contacts were also made with VK4KAY & VK4BKP both in Mackay.

To complete the month, the band again opened on 28th May. Dave VK4ASB in Zillmere worked Kevin VK3WN in Ballarat and Rob VK3XQ. Kevin VK4BPK in Mackay completed contacts with Rob VK3XQ, Norm VK3DUT, Rod VK3TG, Trevor VK3VG, Steve VK5OZ in Adelaide and Joe VK7JG Launceston. Kevin also reported hearing the Alice Springs beacon.

On the 6th June, Jack VK2XQ, Brian VK2BX and Norm VK3DUT all reported hearing strong New Zealand TV and later in the day Jack reported hearing the FK8SIX beacon at S5.

Please send any 6 m information to Brian VK5BC at bceland@picknowl.com.au.

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DX-News & Views *continued*

supporting detail on your QSO. Give me your best guess from memory, who you heard work BS7H just before or after. Chances are one of your friends was in the hunt at the same time, and can help. Remember, it will be a lot easier to remember it now than a month from now. And I'm not in a position to issue a QSL to you 'just because' the web log says you're there. That's not the way it works.

Don't fret the 39 cent stamp or the 84 cent stamp you sent before the postage increase. I'll cover it.

If I do not respond to your email, please don't take it personally. Please follow the guidelines here. I tend to not answer the emails when they ask the questions above, as each email is roughly equivalent to the time it takes to answer 2-3 QSLs ... and I tend to choose to answer the cards first.

I'll let you know when the cards start going out via this forum.

As an aside, if you have a problem with how I do QSLs, how long it takes to get a card from me, etc, please take it up with me directly. I don't appreciate reading it third hand via a reflector, etc. Frankly, if you are kind enough to send me a note, I'll be glad to help research it. In many cases, I may be able to help you understand why the process takes so long for your QSL, as I keep pretty good records of those calls that take time, and for what reasons that is the case.

73

Steve KU9C

Special thanks to the authors of *The Daily DX* (W3UR), *425 DX News* (I1JQJ) for information appearing in this months *DX News & Views*.

For interested readers you can obtain from W3UR a free two week trial of *The Daily DX* from www.dailyydx.com/order.htm

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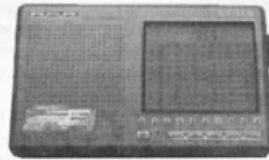
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•AM/FM MOD METER, auto, Sayrosa 252B 1.5 to 1000 MHz fully port int battery (new) \$320 + del. DATA TESTER, Trend 105, port int battery prof quality \$30 + del. Email for pics and more details Terry VK3ZXY QTHR, 0419 300 899, email vk3zxy@netspace.net.au

•EXCHANGE: KW TS 440 gc but needs uP adjustment; for 2/70 5el beam similar to Cushcraft A270-103 Lindsay VK3ANJ phone 03 5155 1380

WANTED VIC

•I am trying to restore/complete my AN/TRC24 Radio system and I am looking for the following parts/units: Transmitter, T-302/TRC. Power Supply, PP-685/TRC. Receiver, R-417/TRC. A Band Plug-in AM-1180/GRC. Amplifier/Converter, AM-2537/TRA-25. Amplifier/Converter, AM-3204/TRC-24. Oscillator/Multiplier, 0-903A/TRC-24. Transformer, TF-167/TRC, and any other bits and pieces for this radio. Thanks for reading this. John Eggington VK3EGG, john@telpacific.com.au, mobile: 0409 234 672

About hamads....

- Submit by email (preferred) or on the form on the reverse of your current Amateur Radio address flyerheet. Please print carefully and clearly, use upper AND lower case.
- Separate forms for For Sale and Wanted items. Please include name, address STD telephone number and WIA membership number.
- Deceased estates Hamads will be published in full, even if the ad is not fully radio equipment.
- WIA policy recommends that the serial number of all equipment for sale should be included.

Email: g.nieman@bigpond.com

Postal: Newsletters Unlimited, 50 Second Street Black Rock 3193.

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FOR SALE QLD

-VK4UA closing, offers near new Nally tower, lowest 3 sections of 150ft tower with winch. Two level tilt over facility with winch \$1250, \$200. GEL3B beams \$350. Remote beams selector \$45. Rotator Kenpro 1000 4.50 degree rotator \$350. Desk control, minor fault \$35. All OBO WKD 337 DX. Bill Wells 07 5546 7041

•GME 12Volt 35 Amp Linear power supply \$1200. CODAN HF Radio, Model 9323-H, 2-30 MHz, complete with 400 Watt amplifier and 24 volt 40 amp power supply, \$1900.00 (will sell items separately). 19 inch rack frame, 1345mm H, 540mm D \$150.00. Equipment is in Brisbane, QLD and would hope for local pick-up from me, but can arrange postage if required at cost. Todd 0409 493 303

•Sanyo shortwave AM-FM car cassette player, FXR-800SW, new in box, never used. S/N 3F517843 \$350. ICOM IC-2GAT with bench charger & 1 duad for spares, manuals, battery etc. S/N 01440 \$150. Doug VK4RU, 0413 614 608.

•VK4ZNK, FT-102, FC-102, FV-102, SP-102, MD-1B8, 07 3266 2025, normalkerr@optusnet.com.au \$200.00

FOR SALE SA

•VK5JST Antenna Analyser kits. Build yourself a world-class instrument for your shack, and improve your HF antenna efficiency. For more details see www.scarc.org.au; contact SCARC PO Box 333 Morphett Vale SA 5162, or email: kits@scarc.org.au

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The Wireless Institute of Australia represents the interests of all amateurs throughout Australia.

The WIA offers one year and 5 year membership for all categories except Concession Student. The fees for each category are Full members \$75 (\$365), Overseas members \$85 (\$403), Concession members (pensioner) \$70 (\$332), Concession members (student) \$70, Full members no magazine \$50 (\$237), Family members \$40 (\$190)

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VK2 New South Wales VK2QV Chris Flak VK2XCD Chris Devery VK2BFN Adrian Clout	Phone 02 9689 2417 vk2wi@ozemail.com.au vk2advisory@wia.org.au	VK2WI - Sunday 1000 and 1930 hours local. 1.845; 3.595; 7.146; 10.125; 14.170; 28.320, 52.525; 145.600; 147.000; 438.525; 1273.500 megahertz. Plus regional relays. VK1WIA news included in the morning
VK3 Victoria VK3JUB John Brown VK3PC Jim Linton VK3APO Peter Mill	Phone 03 9685 9261 arv@amateurradio.com.au	VK1WIA, Sunday 11am and 8pm, 3.615 and 7.085 (LSB), 10.130 (USB), VK3RML 146.700, VK3RMM 147.250, VK3RMU 438.075.
VK4 Queensland VK4BY Don Wilcheski VK4ZZ Gavin Reibelt VK4KF Ken Fuller	vk4advisory@wia.org.au	VK1WIA, Sunday 9.0am via HF and major VHF/UHF rptrs
VK5 South Australia and Northern Territory VK5OV David Box VK5APR Peter Reichelt VK5ATQ Trevor Quick	Phone 08 8294 2992 boxednm@lun.net.au peter.reichelt@bigpond.com vk5advisory@wia.org.au	VK5 South Australia VK5WI: 0900 am local time. 1.843 LSB, 3.550 LSB, 7.140 LSB, 28.470 USB, 53.1 AM, 147.000 FM Adelaide, 146.900 FM South East, 146.925 FM Central North, 439.975 FM Adelaide North. VK6 Northern Territory 0900 local time 3.555 LSB, 7.050 LSB, 10.130 USB, 146.900 FM.
VK6 Western Australia VK6NE Neil Penfold VK6XV Roy Watkins VK6OO Bruce Hedland-Thomass	Phone 08 9351 8873 http://www.vk6.net/ vk6advisory@wia.org.au vk6ne@upnaway.com vk6xv@bigpond.net.au	VK6WIA: 146.700 FM(R) Perth at 0930hrs Sunday relayed on 1.865, 3.564, 7.075, 10.125, 14.116, 14.175, 21.185, 29.120 FM, 50.150 and 438.525 MHz, Country relays 3.582, 147.200 (R) Cataby, 147.350 (R) Busselton, 146.900 (R) Mt William (Bunbury), 147.000 (R) Katanning and 147.250 (R) Mt Saddleback. Broadcast repeated on 146.700 at 1900 hrs Sunday relayed on 1.865, 3.564 and 438.525 MHz : country relays on 146.900, 147.000, 147.200, 147.250 and 147.350 MHz. Also in "Realaudio" format from the VK6 WIA website
VK7 Tasmania VK7ZAX Phil Corby VK7DG Dale Barnes VK7KK Reg Emmett	Phone 03 6234 3553 vk7advisory@wia.org.au phil.corby@taslife.net.au vk7dg@wia.org.au regemm@ozemail.com.au	VK1WIA Sunday 9am on VK7WI network: 1.840 AM, 3.570 MHz LSB, 146.700 FM (VK7RHT South), 53.825 FM (VK7TRAD South), 147.000 FM (VK7RAA North), 146.750 FM & 53.825 (VK7RNW North West), 146.625 FM (VK7RMD North West), UHF CB Channel 15 (Hobart) and 27 MHz CB - 27.225LSB (Hobart). Followed at 9.30am with VK7 Regional News Broadcast also on 7.090 LSB & 14.130 USB

Notes

- Only three members of the state advisory committees are listed.
- All listings are preliminary. They will be updated each month as required.
- Membership application forms are available from the WIA web site www.wia.org.au or the national office address above.

New YL success!



Pam VK4FABB (now VK4PTO), only joined ALARA in 2006, but has been very active ever since. Pam is the first recipient of our newly designed Award, and also the first F call to gain the Award. Pam is now ALARA's VK4 State Representative.

The ALARA Award has been very beautifully redesigned by Kathy VK3XBA, bringing it into the computer age. As from the beginning of 2007 this Award will be open to any amateur, including all those who may already have one of the original Award certificates. Surely this would be another attractive addition to the shack wall. VK & ZL amateurs need only 10 contacts with ALARA YLs in 4 Australian call areas to qualify. DX amateurs only need 5 contacts with ALARA YLs in 3 Australian call areas



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